SMC FFRDC Users Guide 20 January 2004



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SMC FFRDC USERS GUIDE

1.0 Introduction

1.1 Purpose

This guide supplements the current Sponsoring Agreement between the Air Force and The Aerospace Corporation for the operation of the Federally Funded Research and Development Center (FFRDC). The document describes policies and procedures and assigns responsibilities for the utilization of the FFRDC. It describes the interfaces and working relationships between the Air Force Space and Missile Systems Center (SMC) and the FFRDC, and procedures for interfacing with other SMC contractors, other Air Force organizations and other Government agencies in all work the FFRDC performs. This document also provides guidance related to proper use of the FFRDC using separate contracts for Aerospace FFRDC services between non-DoD Government agencies and other organizations and The Aerospace Corporation as appropriate. This guidance is found in Annex 4. Furthermore, the SMC FFRDC Users Guide, including all its annexes and attachments, attached to the contract, serves as the FFRDC surveillance plan.

1.2 Guidance

Applicable documents include the following:

- 1) FAR section 35.017 entitled "Federally Funded Research and Development Centers"
- 2) AFI 63-124 AFMC Sup 1 entitled "Performance Based Service Contracts"
- 3) DoD FFRDC Management Plan, dated 1 May 96 and replacement thereto.
- 4) Current Sponsoring Agreement between the United States Air Force and The Aerospace Corporation for the Operation of the Aerospace FFRDC

1.3 The Aerospace Corporation

The Aerospace Corporation, through an annually incrementing funded research and development Air Force contract that coincides with the Government's Fiscal Year, operates an FFRDC which provides scientific and engineering support. The FFRDC is assigned responsibility for accomplishment of the General Systems Engineering and Integration (GSE&I), Technical Review (TR), or Technical Support (TS) function on specifically identified programs. More detailed descriptions of Aerospace FFRDC Task and Support areas can be found in Annex 2.

In order to provide for effective performance of the Aerospace FFRDC's commitments under the contract, SMC and the Aerospace FFRDC have mutually agreed upon a further definition and description of tasks and responsibilities. These are set forth in this document in sufficient detail to provide guidance to SMC and Aerospace FFRDC operating personnel.

The contract entered into between the sponsoring agency (AF) and The Aerospace Corporation for the operation of the Aerospace FFRDC places requirements on the Aerospace FFRDC for performance of technical work and specifies various terms and conditions under which that work shall be performed. It specifies the direct Staff-year of

Technical Effort (STE) labor hours to be delivered, sets forth specific categories of effort (GSE&I, TR, and TS), and lists programs to be supported in each category. The categories of effort and related tasks in each program are specifically defined in the Technical Objectives and Plans (TO&Ps). Approved STE years and/or dollar constraints are contractually authorized by SMC/AXC. The cost of one STE includes the cost of STE direct labor hours, the cost of the effort of supporting technical and administrative personnel, and all related expenses such as travel, computer usage, overhead, etc. and fees. Because of these elements the cost per STE may vary.

2.0 Terms Explained

- **a.** General Systems Engineering and Integration (GSE&I) GSE&I support is applied to major programs involving complex arrays of hardware and software that comprise system segments and subsystems with multiple interfaces. Long-term continuous support by the FFRDC over the life of the program is usually implied to allow effective risk mitigation support that considers technical, schedule, and cost parameters to assure successful program execution. Tasks include, but are not limited to, those listed below:
 - 1) Systems Studies
 - 2) Acquisition Related Support
 - 3) System Development
 - 4) Programmatic Support
 - 5) Contractor System Design and Analysis
 - 6) Review and Evaluation of Contractor System Performance
 - 7) Review and Evaluation of Integration
 - 8) Test and Operational Support
- **b.** Technical Review (TR) The TR category of effort is applied to those programs or projects that do not require the full scope of GSE&I, for example, when initial system definition is not needed. TR is a subset of the GSE&I responsibility involving any of task categories a.1 through a.8 above. Appraising the technical performance of contractors is an important aspect of TR. If appraising contractor performance were not required, Technical Support would be a more suitable category of effort.
- **c. Technical Support (TS)** TS deals with broad areas of specialized needs of customers' planning, system architecture, research and development, horizontal engineering, or analytical activities for which the Aerospace FFRDC is uniquely qualified by virtue of its specially qualified personnel, facilities, or corporate memory. The following are the five categories of TS tasks. Detailed descriptions are to be found in Annex 2, Section C.
 - 1) Selected Research, Development, Test and Evaluation (SRDT&E)
 - 2) Plans and System Architecture (P&SA)
 - 3) Multi-Program Systems Enhancement (MPSE)
 - 4) International Technology Assessment (ITA)
 - 5) Acquisition Support

d. Technical Objectives and Plans (TO&Ps)

- (1) TO&Ps, required by the AF/Aerospace FFRDC contract, are prepared or updated each fiscal year and as required intermittently for each activity for which the Aerospace FFRDC is assigned technical responsibility under the Statement of Work (SOW). TO&Ps must be prepared by all users of the Aerospace FFRDC covered by the SMC contract. The TO&P is prepared on SMC Form 1640, "Technical Objectives and Plans," and incorporated into the SMC contract for the operation of the Aerospace FFRDC by reference. Annex 2 reflects a standard series of tasks applicable to FFRDC work, which are in harmony with contractual requirements and current practices. It is intended that the scope of Aerospace FFRDC work be defined using the tasks contained in Annex 2, sections A-C. The TO&P will cite Annex 2 and list the tasks to be performed.
- (2) The TO&P is jointly prepared, reviewed and/or updated for the follow-on (fiscal) year by the responsible SMC System Program Office Director/Project Manager/Officer in cooperation with the appropriate Aerospace FFRDC Principal Director/Director/Manager and, after coordination and resulting agreement has been reached, is provided to SMC/AXC for review and comment. Review for compliance with Air Force policies, regulations and practices and contractual sign-off are to be accomplished prior to 15 September. TO&Ps upon which agreement has been obtained will be published and distributed by 30 September. For those on which agreement has not been achieved, the areas of disagreement will be identified and submitted to higher levels at SMC and the Aerospace FFRDC for resolution. Publication will take place as soon as possible after resolution is accomplished. Procedures are similar for all other users of the FFRDC under the contract.
- (3) A similar procedure is followed for any new work agreed to between the Aerospace FFRDC and SMC and other FFRDC users and initiated during the contract period. For new work, coordination, publication and distribution of TO&Ps are to be accomplished within 60 days from the date of authorization and acceptance of the work.
- (4) Revisions to TO&Ps are made when there are major changes in the program or activity or in responsibilities assigned to the Aerospace FFRDC. Changes in Aerospace FFRDC responsibilities may arise due to changes in program plans, priorities, or when significant changes in Aerospace FFRDC funding and STE allocations occur. Revisions are prepared and coordinated in the same way as are the original TO&Ps and are numbered in sequence to facilitate identification and reference.
- (5) The TO&Ps are requested prior to annual renewal of the FFRDC contract.
- **e. Mission Oriented Investigation and Experimentation (MOIE)** MOIE efforts typically develop experimental and test capabilities and execute multi-program systems related tasks critical to support SMC and other DoD agency acquisition processes. Aerospace can also perform analytical and experimental investigations in the sciences and technologies critical to space and space-related systems as part of the MOIE effort. The results of these investigations and the capabilities and experience developed by this effort will be used in the identification of system technology needs, new system designs, acquisition of future systems, and elimination of problems and constraints associated with current systems.

3.0 Policy

The following policy has been established for the use of Aerospace FFRDC technical resources by the Air Force. It applies to other DoD agencies and other Government agencies that wish to use the Aerospace FFRDC technical resources.

- **a.** Considerations Necessary to Justify Use of the Aerospace FFRDC Resource The SMC Chief Engineer's Office, the Program Executive Office (PEO) for Space and Strategic Systems, SMC, the National Reconnaissance Office (NRO), AF and US Space Command, other AF and other DoD and government users, the System Program Directors, and the Project Managers/Officers as well as other non-DoD users each determine the requirements for their level of Aerospace FFRDC support. Prior to allocation of Aerospace FFRDC resources, a determination of the appropriateness of using the Aerospace FFRDC must be made by the requesting activity and submitted in writing to SMC/AX in accordance with Annex 3.
- **b.** Government Direction to Aerospace Personnel Any direction to the Aerospace FFRDC to perform work other than that required by the contract is prohibited and may constitute a violation of the Anti Deficiency Act, 31 USC 1341. Any question concerning the Aerospace FFRDC's responsibility to perform a given task must be immediately referred to the Contracting Officer for resolution. In the event the Aerospace FFRDC performs work other than that required by the SMC contract or any other FFRDC contract, The Aerospace Corporation does so at its own risk.
- **c. Direction to Other Air Force Contractors** Direction to Air Force contractors, including technical direction, shall be given solely by the Air Force contracting officer. The Aerospace FFRDC personnel are not authorized to direct these contractors in any manner.
- **d. Assignment of Responsibility** While the Aerospace FFRDC is responsible for scientific and engineering program tasks, the assignment of responsibilities for GSE&I, TR, or TS by the Air Force to the Aerospace FFRDC does not relieve the Air Force from its overall responsibility in these areas.
 - (1) The "Air Force Space and Missile Systems Center (SMC) Procedures for Allocation of Resources of the Aerospace FFRDC Among DoD Agencies" (Annex 1) provides the criteria for assigning tasks to support specific organizations and programs to the Aerospace FFRDC by a DoD agency.
 - (2) The appropriate FFRDC tasks for the Aerospace FFRDC to perform are outlined in Annex 2.
 - (3) The process and procedures to place FFRDC work on the Air Force/Aerospace Corporation FFRDC contract are explained in Annex 3. This covers DoD, non-DoD government and other users of that contract.
 - (4) The process and procedures to place Non-DoD FFRDC work on direct contract for performance by the Aerospace FFRDC are outlined in Annex 4. It provides the criteria for selection and justification for the Aerospace FFRDC to perform work for a non-DoD agency as well as SMC's role in reviewing such work.

- **e. Precautions** In order to ensure that the unique capabilities of the Aerospace FFRDC are appropriately utilized, the following criteria are established:
 - (1) Proximity of the Aerospace FFRDC and staff should not result in the use of its capabilities for routine technical, administrative, or management tasks that could be considered personal services. Such use diverts skills and funds that should be devoted to priority technical tasks. Some examples of personal services are purchasing support, providing transportation, equipment, and facility or facility-related needs unless authorized in accordance with the collocation agreement found in Annex 5.
 - (2) Aerospace personnel shall not be used to circumvent manpower ceilings or evade the intent of the Civil Service regulations. The AF/Aerospace FFRDC contract is for performance of specific technical functions and tasks in support of designated programs that are supported by a TO&P, and not for the services of individual Members of the Technical Staff (MTS).
 - (3) The Aerospace FFRDC is precluded from performing any work that industry can perform as effectively. In accordance with Annex 3, each requesting government official shall certify that any organic (U.S. government work force) resources, industry at large, or Scientific, Engineering, and Technical Assistance (SETA) contractors cannot perform the requested work as effectively.

f. Enabling Clauses

- (1) When the Aerospace FFRDC has been assigned the GSE&I, TR or TS role, the interface with the contractor will be prescribed by an appropriate enabling clause to assure that the Aerospace FFRDC has access to contractor and subcontractor technical, as well as cost and schedule, information, facilities, and activities and has their cooperation. Without such a clause there is no legal basis for the Aerospace FFRDC/contractor interaction, or protection of either party in the event of any inappropriate disclosure.
- (2) Three standard enabling clauses are provided in Annex 6. They will be used as follows:
 - (a) The GSE&I clause will be included in all system program contracts where the Aerospace FFRDC has been assigned the GSE&I role.
 - (b) The TR clause will be included in all contracts where the Aerospace FFRDC has been assigned the TR role.
 - (c) The TS clause will be included in all contracts where the Aerospace FFRDC has been assigned the TS role and it includes the review of the performance of contractor(s).
- (3) Selection of the applicable enabling clause on SMC contracts requires the coordination by the SMC Acquisition Support Contracts Division (AXC).

4.0 Roles/Responsibilities

To implement the policy set forth in Paragraph 3, the following responsibilities are set forth for the Government and The Aerospace Corporation.

4.1 Government Roles/Responsibilities

- **a. SMC Acquisition Support Contracts Division (AXC)** The SMC Acquisition Contracts Support Division (AXC) serves as the focal point for all Aerospace FFRDC program management, contractual and financial matters. In this role, AXC:
 - (1) Develops and implements policies and procedures in order to maintain a proper management environment between the Aerospace FFRDC and the Air Force.
 - (2) Issues calls for identification of Aerospace FFRDC support requirements from all FFRDC user organizations including requests for TO&P preparation and submittal, to support the sponsors annual review and what if exercise.
 - (3) Reviews requests for Aerospace FFRDC support for adequate justification and provides engineering functional review of all proposed TO&Ps to ensure the effort is adequately described.
 - (4) Reviews and recommends allocations of Aerospace FFRDC STE deliveries to the SMC Commander for approval by 15 September for the next fiscal year's contract.
 - (5) Coordinates and resolves Aerospace FFRDC STE allocation priority matters among the System Program Offices.
 - (6) Releases the approved STE allocations at the beginning of the fiscal year and any changes thereto at least semi-annually.
 - (7) Negotiates, awards, and administers the Air Force contract with The Aerospace Corporation and makes all changes thereto.
 - (8) Authorizes the Aerospace FFRDC to perform effort upon receipt of approved program requests supported by adequate funding from SMC System Program Offices and other users.
 - (9) Provides training to the Functional Directors (FDs) and Functional Area Evaluators (FAEs) and maintains a list of those currently assigned to these positions.
 - (10) Makes a determination of the reasonableness and accuracy of The Aerospace Corporation's final billing.
 - (11) Maintains records of Aerospace FFRDC efforts within its area of responsibility.
 - (12) Collects, summarizes and forwards the semiannual performance evaluations to the Aerospace FFRDC in accordance with Annex 7.
 - (13) Reviews and concurs or non-concurs on the enabling clause included in each SMC contract and coordinates that concurrence or non-concurrence with the FD of that specific contract.
 - (14) Ensures that the responsible Aerospace FFRDC performing organization provides the appropriate level of reporting to all Aerospace FFRDC users.
 - (15) Obtains funding from SMC System Program Offices and other users based on price-out plans to cover reimbursable funding. Contract should be fully funded by 31 December.
 - (16) Acts as the responsible SMC reviewing agent for non-SMC FFRDC programs and other FFRDC efforts outside of SMC contract.
 - (17) Conducts Program Management Reviews (PMRs) with The Aerospace Corporation.

b. SMC Directorate for Systems Acquisition (SMC/AX)

- (1) In conjunction with SMC/AXC, informs the Aerospace FFRDC on mid-term and long-term issues significant to the Aerospace FFRDC that will aid it in making near-term, high-leverage decisions and in taking actions to manage its resources so it can best perform its mission in the future. The information should cover new program activities, shifts in program emphasis, new technologies, resource needs, shifts in roles and responsibilities, organizational interfaces and anticipated initiatives.
- (2) The SMC Chief Engineer (AX) or his/her designee will be responsible for the oversight management of the Mission Oriented Investigation & Experimentation (MOIE) program carried out by the Aerospace FFRDC. In conjunction with the Aerospace MOIE program manager, AXE will be responsible for initiating the fiscal year MOIE plan and coordinating this plan with SMC and NRO program offices, SMC/XR and AF Research Laboratories (AFRL) as appropriate. As part of this coordination AX will solicit requirements to initiate the process and comments on the proposed plan as well as from appropriate program officials, XR and AFRL. The SMC Chief Engineer will review the coordinated plan and make the approval determination. AXE is responsible for oversight management of Aerospace's MOIE efforts. These MOIE efforts will be described in appropriate TO&P(s) signed off by the Aerospace MOIE manager and AXE. Semi-annual evaluations of the MOIE activities will be made by AXE. All proposed changes (during the fiscal year) to the approved MOIE plan will be coordinated with and approved by the SMC Chief Engineer.

c. System Program Offices (SPOs) and Other AF/DoD/Non-DoD Points of Responsibility, all referred to as SPOs

- (1) SPOs determine, coordinate and justify requirements for Aerospace FFRDC support of programs under their responsibility and submit them to the SMC/AXC; keep SMC/AXC informed about changes of these total requirements for Aerospace FFRDC support that occur during the contract period.
- (2) Ensure proper coordination of all proposed TO&Ps through appropriate inhouse functional experts prior to submittal to SMC/AXC.
- (3) Review TO&Ps to ensure tasks are specific and clear enough to develop accurate estimates of the level of support required to meet program objectives.
- (4) SPOs are responsible for the utilization of Aerospace FFRDC resources within their area of responsibility. Shifts of resources must be reported to SMC/AXC.
- (5) In support of their area of responsibility, review and discuss Aerospace FFRDC technical efforts, accomplishments, STE deliveries, current status and planned efforts for the follow-on period with appropriate Aerospace FFRDC management.
- (6) Maintain records of Aerospace FFRDC technical activities and resource utilization for their area of responsibility.
- (7) Provide SMC/AXC with current identification of the program's FDs and FAEs as changes occur.

d. System Program Office Director, Project Managers/Officer Responsibilities as Functional Directors (FDs)

- (1) Determine and justify requirements for Aerospace FFRDC support of programs under their jurisdiction and submit them to the appropriate SPO; keep the SPO informed about changes of requirements for Aerospace FFRDC support that occur during the contract period.
- (2) Perform an independent government estimate of proposed tasking.
- (3) Budget and fully fund the requested STE support by 30 November unless under Continuing Resolution Authority (CRA). The Project Manager/Officer shall provide a funded order to SMC/AXC, which will be accepted on a reimbursable basis.
- (4) Prepare Technical Objectives and Plans (TO&Ps) in coordination with the appropriate Aerospace FFRDC office and in accordance with instructions contained in Annex 3. Further refine the scope of TO&Ps to ensure timely and current emphasis.
- (5) Ensure TO&P tasks are specific and clear enough to develop accurate estimates of the level of support required to meet program objectives and permit an objective evaluation of assigned tasks.
- (6) Prepare Aerospace FFRDC performance evaluations in accordance with Annex 7.
- (7) Review, accept/approve and process technical reports and review, approve or revise the distribution list for Technical Operating Reports delivered by the Aerospace FFRDC in fulfillment of contractual requirements.
- (8) Keep the appropriate SPO informed of significant Aerospace FFRDC activities regarding changes in technical requirements, management problems, and policy matters. Keep SMC/AXC informed on contractual matters.
- (9) Monitor Aerospace FFRDC technical support in accordance with SMC guidelines, and provide necessary guidance to the cognizant Aerospace FFRDC Director on a continuing basis and through scheduled reviews.
- (10) Assign FAEs and identify them to SMC/AXC.
- (11) Ensure FAEs have received training on SMC FFRDC Users Guide.
- (12) Ensure the FAE understands the technical disciplines required to determine acceptability of FFRDC performance.
- (13) Provide FAEs instructions regarding the regular review of the Aerospace FFRDC's cost and performance and enforcement of the criteria contained in this regulation.
- (14) Maintain records of Aerospace FFRDC efforts within area of responsibility.
- (15) Insure that the proper Aerospace enabling clause is inserted into each of the SMC contracts within area of responsibility.
- (16) Coordinate the selection and wording of the Aerospace enabling clause with the SMC Acquisition Support Contracts Division (AXC).

e. Functional Area Evaluators (FAEs)

- (1) Maintain surveillance records. Annex 8 constitutes the surveillance plan.
- (2) Notify the ACO and the FD about any contract problems requiring their involvement for resolution.
- (3) Does not authorize any changes to the contract. Only the Contracting Officer can bind the government and direct the contractor to perform work.

- (4) Submit performance evaluation reports in accordance with Annex 7.
- (5) Maintain familiarity with the requirements (TO&Ps) for which support is provided and monitors the contractor's actual cost and technical performance.
- (6) Receive training on FFRDC responsibilities as required.
- (7) Maintain records of Aerospace FFRDC efforts within their area of responsibility.

f. Comptroller (SMC/FM)

(1) SMC/FMB will be responsible for obtaining reimbursable budget authority to fund the entire Aerospace FFRDC contract.

4.2 Aerospace FFRDC Roles/Responsibilities

4.2.1 FFRDC Roles In view of the special relationship that exists, the Air Force and the Aerospace FFRDC work closely together. However, the Aerospace FFRDC must take the initiative within its assigned areas of responsibility, carry out its efforts in a professionally responsible and objective manner, and be accountable for the results of its work through written documentation and transmittal of its recommendations and supporting technical information to the Air Force.

a. Systems Engineering Director/Principal Director for GSE&I

- (1) To assure the effective performance of General Systems Engineering and Integration (GSE&I), The Aerospace Corporation will designate a Systems Engineering Director or Principal Director (herein after referred to as Aerospace Director) to be responsible for each TO&P that the FFRDC is assigned a GSE&I role. The Aerospace Director will act on behalf of the Aerospace FFRDC in discharging its contractual responsibility to the Air Force. These activities are defined more specifically in the applicable TO&P prepared in accordance with Annex 3. The schedule and support level for individual tasks will be based on the program priorities and requirements as agreed with the Air Force (or other government) Program Director.
- (2) The activities of the Program Director and Aerospace Director will be closely coordinated. While the Aerospace FFRDC works principally in technical areas, the Program Director will provide, when appropriate, access to cost and schedule data, and pertinent information on management actions.
- (3) The Aerospace Director, within the agreed upon allocation of GSE&I resources, will exercise initiative and provide timely identification of all reasonable alternatives on problematic issues. The Aerospace Director will provide in writing a thorough, complete and competent analysis of the system engineering aspects of the program in order to provide a sound basis for selection, decision and (where appropriate) implementation of technical direction by the Air Force. The Aerospace Director will keep the Air Force Program Director informed of current activities regarding plans for future Aerospace FFRDC work, results of reviews, contractor performance, and recommendations. The Aerospace Director will review and evaluate specified critical documents and provide written concurrence and recommendations as required or appropriate.

- (4) When applicable, the Aerospace Director will be accountable to appropriate SMC management for launch readiness in concert with the cognizant Aerospace Corporation Vice President who has been delegated the responsibility for independent launch readiness verification.
- (5) Aerospace support for launch and flight test operations at field locations requires close coordination among collocated support groups, between the field organization program manager as well as the Aerospace FFRDC project engineer assigned to this facility as well as with the Program Director and the Aerospace Director at SMC.

b. Director/Project Engineer for Technical Review

- (1) To assure the effective performance of Technical Review (TR) in accordance with the requirements of the applicable paragraphs of the AF/Aerospace contract, The Aerospace Corporation will designate a Director or Project Engineer to be responsible for each TO&P that the FFRDC is assigned a TR role. These activities are defined more specifically in the applicable TO&P prepared in accordance with paragraph 2d and Annex 3.
- (2) The activities of the Government Project Manager/Officer and the Aerospace FFRDC Director/Project Engineer will be similar to those outlined in paragraph 4.2.1.a (2) and (3) as applicable to the assigned TR tasks.

c. Director/Project Engineer for Technical Support.

- (1) To assure the effective performance of Technical Support (TS) in accordance with the requirements of the applicable paragraphs of the AF/Aerospace contract, The Aerospace Corporation will designate a Director or Project Engineer to be responsible for each TO&P that the FFRDC is assigned a TS role. These activities are defined specifically in the applicable TO&P prepared in accordance with paragraph 2d and Annex 3.
- (2) The activities of the Project Manager/Officer and the Aerospace Director/Project Engineer will be similar to those outlined in paragraph 4.2.1 a (2) and (3), herein, as applicable to the assigned tasks.

4.2.2 FFRDC Responsibilities

- **a. Meetings** In the performance of its assigned technical functions the Aerospace FFRDC shall participate in meetings with contractors as follows:
 - (1) The Air Force may request that the Aerospace FFRDC be present at Technical Direction Meetings and other formal meetings in which the Air Force plans to direct the contractors or resolve or act on a technical matter. Such meetings are scheduled and chaired by the Air Force in accordance with a plan coordinated with the Aerospace FFRDC.
 - (2) The Air Force may invite Aerospace FFRDC representatives to attend management meetings with contractor officials that are held for discussion of the conduct of the contractual efforts.
 - (3) In carrying out the tasks of General Systems Engineering and Integration, Technical Review, or other contractually required functions, the Aerospace FFRDC, with prior approval of the Air Force, will participate in Technical

Interchange Meetings (TIMs) for the purpose of exchanging technical information with contractors and subcontractors.

- (4) When appropriate, the Aerospace FFRDC will be invited to participate in meetings with higher headquarters and other DoD or other U.S. Government agencies.
- (5) The Air Force may request Aerospace FFRDC representation in government or contractor Integrated Product Teams (IPT), in which case Aerospace will participate in all IPT meetings.

b. Comments and Recommendations

- (1) The Aerospace FFRDC comments and recommendations for modification, realignment or redirection of a contractor's effort will be submitted in writing to the Air Force Program Director or Project Officer outlining the reasons for the recommendation and defining the proposed change in appropriate form to facilitate the Air Force's decision regarding implementation.
- (2) The Program Director or Project Manager/Officer will review the potential effects of the Aerospace FFRDC comments and recommendations on the project and review decisions with the Aerospace Director or Project Engineer, if appropriate, after taking into consideration all relevant factors.
- (3) If the Aerospace Director or Project Engineer believes that the Air Force decision is not in the best interest of the program, the Air Force Program Director or Program Manager will be informed and a higher level Aerospace management review with the Air Force will be requested. Implementation of the decision may, at the Air Force Program/Project Manager's discretion, be withheld pending the review. If not otherwise resolved, ultimate referral will be made to the SMC Commander (or equivalent other users) and the President of The Aerospace Corporation. The Commander's decision will be final. In the event that agreement is not reached at this level, the Aerospace FFRDC will document its recommendations for inclusion in the SMC official Aerospace FFRDC contract file.

c. General Responsibilities

- (1) SMC is solely responsible for communications with other organizations within the Air Force, with other governmental agencies, and with SMC contractors in matters related to their areas of responsibility. The Aerospace FFRDC may, in the exercise of its technical responsibility, communicate and discuss technical matters with the Air Force, other government agencies, SMC contractors, and other technical organizations. The Aerospace FFRDC may also review correspondence relating to the activity with the Air Force prior to transmittal of such correspondence. To assure proper technical coordination, the Air Force will inform the Aerospace FFRDC, when appropriate, of all technical correspondence to SMC contractors prior to issuance.
- (2) For Aerospace FFRDC presentations to SMC elements, including the SMC Commander, the Aerospace FFRDC may select subjects and speakers as desired, contingent upon prior coordination with the cognizant program office. However, when the Aerospace FFRDC participates with SMC program offices in presentations to higher levels within the Air Force, or to entities outside the Air Force, the cognizant program office will approve speakers and presentation

material. This restriction applies since the presentations of Aerospace FFRDC personnel may be interpreted as representing the position of the SMC Commander. Additionally, all Aerospace FFRDC presentations or papers that are to be given to entities outside SMC and which were prepared under the SMC/Aerospace contract must be reviewed and approved by the appropriate SMC element. For unclassified presentations, papers, or foreign release, the SMC Office of Public Affairs (PA) is the review/approval authority. For classified presentations or papers, the SMC Directorate of Security (AXP) is the review/approval authority. Similar rules apply for non-SMC work with other AF or DoD programs.

d. Access to Cost and Schedule Data

- (1) Cost negotiations with contractors are the sole responsibility of the Air Force. The Aerospace FFRDC will not be held responsible in any way for these activities.
- (2) SMC or other users of the Aerospace FFRDC will provide the Aerospace FFRDC with all cost and schedule information necessary to accomplish technical evaluations and tradeoff studies as required for performance of its technical responsibilities, which include but are not limited to (a) technical evaluations of the bases of contractor-provided cost, schedule, and program management information, and (b) technical evaluation of cost and schedule methods and models used by contractors or other users of the FFRDC. Aerospace FFRDC access to a contractor's cost and schedule data is provided by the Enabling Clause (see Annex 6).
- (3) The Aerospace FFRDC will respect the confidential nature of contractor cost information in accordance with the conflict of interest clause, AFMC FAR Sup.5352.209-9002. The Aerospace FFRDC will not disclose or use any such data in whole or in part for any purpose other than in the performance of its responsibilities as set forth in its contract.

e. Source Selection

- (1) Source selection activities regarding proprietary data/information of bidders are the responsibility of the Air Force. The Air Force or other government users may call upon the Aerospace FFRDC to provide employees as independent consultants on specific matters in accordance with FAR 37.2 or as source selection evaluators or Performance Risk Assessment Group (PRAG) advisors. (2) All requests for source selection consultants or assistance will be by letter to the appropriate Aerospace General Manager or Operations Vice President, outlining the special assistance required. Such requests will be signed either by the Source Selection Evaluation Board Chairman, the cognizant SMC Program Director, or other appropriate point of contact.
- (3) Designated Air Force (other government users) and/or bidders material pertaining to a source selection activity will be reviewed and evaluated by Aerospace FFRDC personnel within the confines of the designated Source Selection facility room(s) as authorized by the government Source Selection Authority. Any signed data or reports inclusive of electronic media prepared by Aerospace FFRDC personnel within the confines of the designated Source Selection facility room(s) shall remain in the room(s) as working papers or

electronic working papers of the FFRDC User Source Selection Evaluation Team or Source Selection Evaluation Board.

- **f.** Contracted Deliverables The following are the deliveries that The Aerospace Corporation has contracted to provide the Government documentation of its FFRDC activities. A detailed description of the technical deliverables (briefly discussed in items 2 through 6 below) can be found in Annex 9 of this FFRDC Users Guide.
 - (1) The Aerospace Corporation shall develop performance and cost reports showing current status and projected requirements of funds, hours, and work completions. These reports are to include a monthly status report, a quarterly management report, and a monthly list identifying forecast and actual equipment procured IAW SCR H.017 by type and acquisition cost. Aerospace's Contracts Directorate shall provide these reports to SMC/AXC.
 - (2) The Aerospace Corporation shall provide periodic progress reports, referred to as Contract Status Reports (CSRs), to the SPOs, Divisions, Project Offices, and other Air Force/DoD/non-DoD points of responsibility. The format, medium, and frequency of these reports shall be as mutually agreed to and specified in the TO&P, with the provision that the frequency of reporting shall not be less than quarterly. The CSR shall include concise semi-technical descriptions of program progress and contributions during the period to document achievements against established objectives and plans. Material to be covered may also include a brief description of tasks performed in the reporting period, accomplishment highlights, technical issues, and recommendations, expenditures of Aerospace FFRDC STE, current period and cumulative FFRDC costs versus budget, and forecast runout rates. The responsible office will retain this documentation for a minimum of one year.
 - (3) The Aerospace Corporation shall provide the SMC Command Section an annual summary review of FFRDC technical activities. Material to be covered includes short summaries of Aerospace FFRDC tasks performed in the reporting period, accomplishment highlights, any outstanding technical issues, expenditures of Aerospace FFRDC effort, current period and cumulative Aerospace FFRDC costs versus budget, and forecast runout rates. The SMC Chief Engineer shall retain these reports.
 - (4) The Aerospace Corporation shall provide program plans and progress reports for MOIE efforts performed by Aerospace's Laboratory Operations Division in satisfaction of the requirements stated in the MOIE TO&Ps signed by Aerospace Laboratory Operations management.
 - (5) Aerospace shall prepare Technical Operating Reports (TORs) as simple, non-periodic reports or other products representing technical efforts undertaken by The Aerospace Corporation as part of its FFRDC activities. TORs are used to transmit technical data or information on a timely expeditious basis in a relaxed contractor format not generally suited for release to the Defense Technical Information Center. The TOR category may include, but is not limited to results of studies and analyses, technical assessments, preliminary or final reports, letters, drawings, briefing charts or books, test data, computer tab-runs, databases, videotapes, etc. TORs shall be submitted on an "as required" or "as appropriate" basis. Specific requirements with regard to submittal date, quantities, approval requirements, and distribution/addresses shall be specified in the TO&P. Unless

- specifically required by SMC/AXC or the customer of prime responsibility noted in the TO&P for which the work was performed, formal written customer approval is not required for TORs. If appropriate, and with the concurrence of the program office of primary responsibility, TORs may be released to the Defense Technical Information Center.
- (6) The Aerospace Corporation will submit Technical Reports (TRs) on any systems development program or major phase or task thereof, or any other advanced development, exploratory development, development support research and experimentation, or any other category of project, task, study, or investigation assigned under the FFRDC contract on an "as required" basis. This means that whenever in the opinion of the government project or task engineer or investigator, scientific or technical information of a significant nature has been identified, a TR will be prepared. Submittal dates shall be as mutually agreed upon between the cognizant Government Agency project/task engineer or investigator and Aerospace. The TR approval requirement is as follows, or as specified in the TO&P: The designated government project or task engineer or investigator will review and approve the technical content, initial distribution list, and distribution statement list proposed by the contractor. Request for unlimited distribution of a report must be submitted to SMC/PAS for approval. TRs are generally suited for release to the Defense Technical Information Center.
- (7) The Aerospace Corporation shall supply SMC/AXC with a monthly listing of CSRs, TORs, and TRs.
- (8) The Aerospace Corporation shall supply Accident/Incident Reports when exposure to chemicals, materials, or physical agents results in individual(s) seeking medical attention.
- **g. Space Utilization and Provision of Certain Support Functions** In accordance with Annex 5, which covers policy and procedures on the mutual use of facility space between Air Force Space and Missile Systems Center and other Aerospace FFRDC user personnel and Aerospace FFRDC personnel:
 - (1) Base Support to the Aerospace FFRDC and Aerospace Facility Support to Government customers will be in accordance with the AF/Aerospace contract and consistent with Annex 5.
 - (2) The Systems Program Office and the corresponding supporting Aerospace FFRDC organization, where applicable, will be located in reasonable proximity to the maximum extent practicable.
 - (3) Space will be allocated to the Aerospace FFRDC and the Air Force (Government) on an equitable basis, recognizing the designed site configurations of Aerospace and Government buildings.
- **h. Security and Emergency Actions** Agreements between SMC and The Aerospace Corporation relating to security and emergency actions are coordinated between the Chief, Security Police Division, SMC, or the Security Manager at locations other than SMC where Aerospace personnel are collocated, and the Principal Director, Security and Safety, The Aerospace Corporation.

4.3 Purchase of Direct Charge Equipment and Material by the FFRDC

The Aerospace FFRDC is authorized to obtain needed equipment and material for its customers, both DoD and non-DoD, under the SMC contract. These items are normally directly charged to a user's program budget, and thus taken from funds supplied to SMC. Users are responsible to ensure that sufficient funds are available for both labor and Other Direct Costs (ODCs), including equipment. Major ODC items should be identified as early as possible for inclusion in the user's proposal for the Air Force contract. It is recommended that TO&Ps include a very brief statement of ODC requirements if there is a need for significant ODC dollar expenditures.

Aerospace's purchasing system and procedures, as well as Federal Acquisition Regulations, apply to all direct charge Government program purchases. Therefore, certain purchases will have additional requirements, such as a sole source or technical justification, advance notification or consent, or Government Program Manager/SPO concurrence

4.3.1 Special Purpose Plant Equipment (SPPE)

Most purchase requests for equipment (or a related set of equipment) over \$1,500 require a strict review and approval process. The Aerospace Contracts Directorate performs oversight. This plant equipment, with the special purpose of supporting one program, is classified as *Special Purpose Plant Equipment* (SPPE) and is funded outside the Air Force allocation ceiling. Title to SPPE vests with the Government. Upon receipt by Aerospace, it is transferred and becomes accountable to the Aerospace Facilities Use Contract. A justification memo, initiated by either the Government or Aerospace program office, with documented concurrence of the Government Program Manager/SPO, is required at the time requisitions are issued. If the requisition (or set of requisitions for a system) is over a specified dollar ceiling, the Aerospace program office is also required to brief and obtain approval of the Aerospace SPPE Committee. Aerospace Contracts Directorate submits an SPPE report monthly to the Contracting Officer in accordance with the Contract Data Requirements List (CDRL) Item A001.

SPPE is:

- Equipment with a value over \$1,500
- Contractor-acquired, Government-owned equipment in the possession and use of Aerospace for an extended amount of time, <u>not</u> for (near-term) delivery to the Government user
- Basically off-the-shelf or catalog available (or built up from those items), with little or no customization
- For the sole use of one program (with few exceptions)
- SPPE related items*.

*Material, software, facilities modifications and the first-year of maintenance support may qualify as "SPPE related items" by reason of a *necessary relationship*: related by incorporation into an SPPE item or system, or related by being directly needed for the operability of the SPPE.

SPPE is <u>not</u> Special Test Equipment, Special Tooling, software, material or custom fabricated material, or facilities, when they are purchased as standalone items.

4.3.2 Direct Charge Material Purchases

Direct charged material purchases by Aerospace in support of a Government program are usually processed in a routine manner, except for those instances that have special requirements due to procedure or regulation.

List of Annexes

Each of the following annexes is the current version as identified by the date on each of the individual cover pages and the dates provided below. Documents under revision (as of the date of this Users Guide update) will be identified in the Notes below. SMC/AXC maintains configuration management of the latest versions of the annexes.

Annexes may be individually revised and incorporated into the SMC FFRDC Users Guide as needed. Therefore, readers are advised to check the following SMC web site for the latest version of the Users Guide: http://ax.laafb.af.mil - click on Chief Engineer's section.

Annex	Date	Title	Notes
1.	20 Jan 04	Air Force Space and Missile Systems Center (SMC) Procedures for the Allocation of Resources of the Aerospace FFRDC Among DoD Agencies	Changed Mission Statement, Updated TO&P Call schedule from semi-annual to annual, Editorial changes
2.	20 Jan 04	FFRDC Tasks	Editorial changes
3.	20 Jan 04	Process Instruction to Place FFRDC Work on the Air Force/Aerospace Corporation FFRDC Contract	TO&P schedule changed from semi-annual to annual
4.	20 Jan 04	Process Instruction to Place Non-DoD FFRDC Work on Direct Contract for Performance by the Aerospace FFRDC	Editorial changes
5.	20 Jan 04	Procedures to Govern the Mutual Use of Facility Space Between the Government and Aerospace FFRDC Personnel	Updated Aerospace facilities use procedures for government contractor personnel
6.	20 Jan 04	Enabling Clauses for General Systems Engineering and Integration (GSE&I), Technical Review (TR) and Technical Support (TS)	Aerospace access to non-financial cost data allowed
7.	20 Jan 04	Process Instructions for Performance Evaluation	Award Fee Plan eliminated, Performance evaluation in- structions streamlined, Evaluation schedule changed
8.	20 Jan 04	Aerospace FFRDC Contract Overview of Processes, Responsibilities, and Surveillance	Updated TO&P Call schedule from semi-annual to annual, Editorial changes
9.	20 Jan 04	Contract Deliverable Items	Updated with FY04 CDRLs
10.	20 Jan 04	List of Acronyms	New

ANNEX 1

20 January 2004

Air Force Space and Missile Systems Center (SMC) Procedures for the Allocation of Resources of the Aerospace FFRDC Among DoD Agencies

Annex 1

AIR FORCE SPACE AND MISSILE SYSTEMS CENTER (SMC) PROCEDURES FOR THE ALLOCATION OF RESOURCES OF THE AEROSPACE FFRDC AMONG DoD AGENCIES

Purpose: The purpose of this Annex is to outline the process to allocate FFRDC resources (MTS/STE) to the users of The Aerospace Corporation FFRDC Contract.

- I. DEFINITIONS. For the purpose of this Annex, the following definitions will apply:
- a. Responsible Officer (RO): The Commander, SMC/CC. Aerospace DoD ceiling allocations are under control of the RO.
- b. DoD Agencies: Supporting agencies include, but are not limited to Departments of the Army, Navy and Air Force, Director of Defense Research and Engineering (DDR&E), Defense Special Weapons Agency (DSWA), Defense Intelligence Agency (DIA), Defense Information System Agency (DISA), Defense Mapping Agency (DMA), Defense Advanced Research Projects Agency (DARPA), National Security Agency (NSA), the Office of Joint Chiefs of Staff (OJCS), Air Force Space Command, and the National Reconnaissance Office (NRO).
- c. Agency Focal Point: A specific office designated by the DoD Agency as the single point of interface between the agency and the Air Force on all matters pertaining to support from the Aerospace FFRDC.
- d. SMC Focal Point for Aerospace FFRDC Matters: The contract management office (AXC) at SMC shall serve as the focal point between DoD agencies and SMC/AX with respect to Aerospace FFRDC contractual matters. All communications from DoD agencies relating to support from the Aerospace FFRDC will be addressed to SMC/AXC.
- e. Fiscal Year: The Fiscal Year for budgeting purposes shall be the Federal Fiscal Year, that is, 1 October through 30 September. (The Aerospace FFRDC contract will coincide with the Fiscal Year.)
- f. Baseline Program: The allocation of Aerospace FFRDC STE as approved by the RO to commence the Fiscal Year
- g. Member of the Technical Staff (MTS): An MTS is a professional scientist or engineer actively and directly engaged in performing General Systems Engineering & Integration (GSE&I), Technical Review or Technical Support (see Annex 2 of the SMC FFRDC Users Guide for descriptions of tasks associated with these general categories of effort). The corporation designates individuals as MTS. The Staff Year of Technical Effort (STE) is the basic unit of measurement for stating technical support requirements of the MTS

- II. MISSION. The mission of The Aerospace Corporation in the performance of its FFRDC activity is to aid the United States Air Force and the United States Government in applying the full resources of modern science and technology to achieve continuing advances in national security space and space-related systems which are basic to national security; to provide the Air Force's space efforts with an organization which is objective, possesses high technical competence, and is characterized by permanence and stability; to provide a vital link between the U. S. Government and the scientific and industrial organizations in the country with a capability and interest in the space field and, through its unique role, to help to ensure that the full technical resources of the nation are properly applied, and that the potential advances in the space field are realized in the shortest possible time.
- III. POLICY. The DoD policy designates the U.S. Air Force as the sponsor of the FFRDC operated by The Aerospace Corporation. The cognizant DoD component is responsible for establishing review procedures to insure that DoD work undertaken by the Aerospace FFRDC does not exceed the dollar and/or manpower ceiling level approved by OSD/DDR&E and to insure that such work meets the criteria described herein. The Aerospace FFRDC represents a valuable but limited resource, which exists primarily to support the mission of SMC and other AF/DoD organizations working on space systems.

IV. BASIC CONSIDERATIONS

- a. Any determination to assign work to the Aerospace FFRDC must be preceded by an assessment demonstrating that an organic or non-FFRDC organization cannot meet the cognizant program office's technical requirements. The use of the Aerospace FFRDC will be restricted to selected important projects and programs which are consistent with its assigned mission, require its particular capabilities, and conform to the policy criteria for DoD use of federally funded research and development centers set forth below.
- b. The Aerospace Corporation will be responsible for contractually authorized work. The Aerospace Corporation will not be tasked contractually or otherwise to provide individuals for assignment and/or direction by the user in contravention of the statutory prohibition against personal services (5th U.S.C. Section 3109). It will manage STE resources to accomplish specific tasks in accordance with the Contracting Officer's direction.
- c. The Aerospace FFRDC roles and responsibilities on each project or program will be clearly defined and documented in the approved contractual statement of work and supporting documentation.
- V. FORMULATION OF FISCAL YEAR PROGRAM. The determination of STE requirements is a coordinated effort at several levels of SMC and the Aerospace FFRDC's management. The following is how the STE requirements are established and coordinated. The approval process is described as well as the estimating factors that are considered.

- a. The Coordination and Approval Process:
- (1) SMC/AXC: Issues request to SMC Two-Letter Offices once a year and all other MTS/STE users of the current fiscal year contract for follow-on fiscal year's requirements. Also sends requests to potential new users.
- (2) Two-Letter Office or Other User: Reviews and submits requirements on SMC Form 1640 (Technical Objectives and Plans) for the follow-on fiscal year to SMC/AXC.
- (3) SMC/AXC: Reviews and consolidates all inputs. Provides a copy of the consolidated requirements to the Aerospace FFRDC's management for review and assessment.
- (4) Aerospace FFRDC: Aerospace FFRDC management reviews consolidated requirements. Provides comparative analysis to SMC/AXC including basis for the Aerospace FFRDC recommendation.
- (5) SMC/AXC: Reviews with SMC Two-Letter Offices the comparative analysis and finalizes Two-Letter Offices' requirements. Informs the Aerospace FFRDC of requirements. Does similar review of other users
- (6) Aerospace FFRDC: Advises, as necessary, on the viability of estimated STE/MTS deliveries and associated risk considerations.
- (7) SMC/AXC: Prepares the fiscal year Aerospace FFRDC support requirements briefing and presents to SMC/CC-CV.
- (8) SMC/CC-CV: Makes decision regarding STE/MTS.
- (9) SMC/AXC: Briefs appropriate higher-level decision makers.
- (10) SMC/AXC: Negotiates, awards and administers contract with The Aerospace Corporation for the operation of the Aerospace FFRDC.
- b. Adjustment to STE Requirements: Due to program requirement changes or changing space systems priorities, the Aerospace FFRDC STE support requirements may increase or decrease by program. All changes are reviewed/approved by SMC/AX and communicated to Aerospace via the Procurement Contracting Officer (PCO) (SMC/AXC).
- (1) Changes to programs sponsored by an SMC Two-Letter Office or equivalent Government customer that do not increase the total Aerospace FFRDC STE support to the SMC Two-Letter/Government customer Office can be authorized by the Two-Letter/Government customer Office and communicated to SMC/AXC.

- (2) Changes that increase support to an SMC Two-Letter Office or equivalent Government customer must be justified and presented to SMC/AX for approval. SMC/AX should try to satisfy the increase by shifting STE resources amongst Two-Letter Offices, if possible. If the net sum of the increase is within 1% of the total Aerospace FFRDC support, SMC/AXC can approve the change. However, if the net change is greater than 1%, approval must be obtained from SMC/CC.
- (3) Changes to programs within the SMC contract, excluding non-DoD sponsored programs, but not sponsored by an SMC Two-Letter Office are submitted to SMC/AXC for review and if the net sum increase falls within the SMC/AXC approval authority, SMC/AXC can approve the change. However, if the increase is greater than the approval authority of SMC/AXC, approval must be obtained from SMC/CC.
- (4) Changes to non-DoD programs within the SMC contract are submitted to SMC/AXC for review. Approval must be obtained from SMC/CC or his/her designee.

VI. ROLES AND CRITERIA FOR ALLOCATION OF FFRDC STE SUPPORT

- a. Major Areas of Support. This section provides basic guidelines regarding the roles assigned to the Aerospace FFRDC in providing technical and scientific support to FFRDC users.
- (1) Core Competencies: Core competencies encompass technical and scientific support areas that Aerospace can provide and which are listed below and further described in Annex 3, Attachment 2.
- (a) Launch Certification
- (b) Systems of Systems Engineering
- (c) Systems Development and Acquisition
- (d) Process Implementation
- (e) Technology Application
- (2) Systems Engineering FFRDC Core Functions: The tasks which the Aerospace FFRDC may perform are encompassed by the following list of Systems Engineering FFRDC Core Functions which are further described in Annex 3, Attachment 3.
- (a) Systems Architecture Planning and Development
- (b) Operational Requirements Analysis and Evaluation
- (c) Integration Management
- (d) Mission and Threat Analysis
- (e) Technical Performance Analysis and Assessment
- (f) Acquisition Planning, Preparation, and Evaluation
- (g) Program, Milestone, and Design Reviews
 (h) Technology Requirements, Applications, and Research
- (i) Program Systems Engineering (j) Monitoring Launch Vehicle and Satellite Processing and Certifying Launch Readiness

ANNEX 2 20 January 2004 FFRDC Tasks

Annex 2

FFRDC TASKS

Purpose: The purpose of this Annex is to define the technical tasks categories appropriate for the Aerospace Corporation FFRDC. Tasks corresponding to the GSE&I, Technical Review and Technical Support categories of effort are found in Section A-C. These FFRDC tasks are either performed by Aerospace or by teams comprised of contractor, Air Force, and Aerospace representatives known as Integrated Product Teams (IPTs). These tasks are only performed at the request of the cognizant Government customers and are documented in the appropriate TO&Ps.

A. General Systems Engineering and Integration (GSE&I) Tasks

GSE&I support is applied to major programs involving complex arrays of hardware and software that comprise system segments and subsystems with multiple interfaces. Long-term continuous support by the FFRDC over the life of the program is usually implied to allow effective risk mitigation support that considers technical, schedule, and cost parameters to assure successful program execution. Tasks include but are not limited to those listed below.

I. Systems Studies

- 1. Architectural Design and Analysis. Development and analysis of systems-of-systems, systems and subsystems concepts to meet evolving national security objectives. Identify, develop and recommend alternative concepts, evaluate alternatives with respect to meeting the objectives and risk, provide evaluation and analysis support in the selection process and recommend system improvements as necessary leading to total system-of-systems and systems definition.
- 2. System Design. Refine architectural designs to systems designs by developing hierarchical system functional/operations, performance, subsystem and interface definition using systematic identification and analysis of trade-offs (including modifications) in meeting operational and programmatic requirements and constraints.
- 3. Requirements Analysis. Identify, develop, resolve uncertainties in, and document verifiable technical requirements through evaluation of systems architectures, designs, tradeoffs and risk in meeting operational and programmatic requirements and constraints throughout the lifecycle. Support the development and refinement of operational requirements.
- 4. Requirements Verification Planning and Analysis. Identify, develop, define execute and evaluate mechanisms and procedures for verifying the ability of both systems designs and systems to meet technical requirements throughout the lifecycle.

II. Acquisition Related Support

Pre-Award Support. Assist in the review, evaluation, and/or preparation, and provide
recommendations as appropriate, on acquisition related and program critical documents and
processes. These could include but are not limited to: Requests for Proposals (RFPs) and
RFP Packages, specifications, technical standards for source selection, Statements of Work

- or Objectives, Contract Data Requirements List, unsolicited proposals, etc. Pre-award acquisition support may also include advising and/or evaluating during source selection (FAR 37.203(d)(2) and AFFARS 15.303-30(f) and (g)).
- 2. Market Research. Gather, organize, analyze, and maintain information on space-related products, practices, technologies, standards, and companies throughout the DoD life cycle to support the definition of requirements, definition and development of concepts and solutions, assessment of business cases, management and assessment of risk, development and execution of acquisition strategies and solicitations, conduct of source selections, and execution of acquisitions. Integrate the market research associated with technical, contracting, cost, and program management activities and provide the results for use in the Customer's decision-making process. Consider the use of commercial item solutions and the adoption of commercial practices in support of warfighter needs. Develop and deploy information, training, and tools for timely and effective market research.
- 3. Top Level Program Documentation. Participate in the preparation of documentation required for obtaining program approvals and supporting program reviews and other acquisition processes such as those related to the Acquisition Strategy Panel and the Decision Authority Board. Prepare, review, or tailor a recommended list of required program documents. Participate in the preparation, update and/or evaluation of program documentation such as, but not limited to, general system test plans, program requirements, operational requirements, orbital support requirements and/or plans, system/system segment specifications, etc.
- 4. Specifications, Standards and Processes. Support the establishment, identification and use of criteria for hardware and software standards, specifications and processes. This can include (but is not limited to): program standards; and industry-accepted standards, specifications and processes.

III. System Development

- 1. Identification and Assessment of Schedules. Identify, assess (including expected task duration, resources and associated risk), track, and participate in planning involving major/critical technical and programmatic events and their interdependencies with respect to achieving the requirements (including schedule and cost).
- 2. Develop and Assess Event Evaluation Criteria. Develop processes, procedures, parameters and threshold values or other criteria to evaluate the ability of the products associated with major/critical technical events to meet requirements. Use the developed processes, procedures and criteria to determine whether the products meet the requirements. Assess the associated risk and potential impacts, and recommend mitigation strategies.

IV. Programmatic Support

1. Teams. Participate in, and provide expertise to, various teams and working groups of significant importance to a program or project. These teams and working groups can be made up of Aerospace-only, Aerospace and Customer-only, or Aerospace/Customer/Contractor personnel. These teams and working groups can range from being authorized from the highest level of the

Government and convene in a very formal manner to teams that are authorized at the lowest management level of the Customer organization and formed in an ad hoc manner. Activities include, but are not limited to, establishing, operating, participating, and, when appropriate, leading:

- Working Groups (WGs)
- Integrated Product Teams (IPTs)
- Independent Review Teams (IRTs).
- 2. Meetings. Support the Customer by participating in meetings as necessary. These meetings may be with the Customer and other Air Force, DoD, or other appropriate Government agencies, or with Contractors. This may involve pre-meeting planning and preparation activities; participation during meetings, including briefing on selected subjects; and providing support to the Customer as a follow-up activities stemming from meetings. Examples of meetings in which support is provided include, but are not limited to:
 - WG, IPT, or IRT meetings
 - Acquisition Milestone Reviews
 - Management Meetings and Reviews
 - Technical Interchange Meetings (TIMs)
 - Technical Direction Meetings
 - Program Status Reviews
 - Design Reviews
 - Independent Readiness Reviews (IRRs)
 - Mission Readiness Reviews (MRRs)
 - Launch Readiness Reviews (LRRs)
 - Configuration Audits
 - Cost and schedule meetings important for Aerospace to perform its technical responsibilities
- 3. Review and Evaluation of Critical Information. Review and evaluate program related information for compliance with contractual requirements and/or mission objectives and provide written concurrence and/or recommendations as required. This information can be captured in various media and forms including, but not limited to:
 - Electronic and paper documents
 - Data captured in electronic or paper form.

This information can be authored by:

- The Customer
- Another DoD or Government agency
- The Contractor
- A team or working group that may consist of:
- Customer representatives
- Other DoD or Government agency representatives
- Contractor representatives
- FFRDC representatives.

There are no constraints as to the type or form of the information products as long as the content is significant to the program or effort.

V. Contractor System Design and Analysis

- 1. Review and Evaluation of Contractor Activities and Documents. Review and evaluate contractor activities and documentation for compliance with contractual requirements. The reviews and evaluations may include, but are not limited to:
 - Contractor studies
 - Analyses and data pertaining to all elements of the system (e.g. hardware, software, data processing, safety, communication and connectivity, integration, interfaces, reliability, failure modes, facilities, data/ground/test support systems, and orbit)
 - All associated design schematics, test data, performance predictions, equations, algorithms, software, programs, models, simulations, and cost models.
- 2. Independent FFRDC Activities. As appropriate, conduct independent analyses and tests, such as performance analyses and the testing of hardware and software, to verify the adequacy of the contractors' predictions and designs. When appropriate or requested, prepare/maintain technical data, such as reference trajectories, and submit to the SPO for utilization by the contractor. Validate contractor-supplied models against benchmark models.

VI. Review and Evaluation of Contractor System Performance

- 1. Review and Evaluation of Contractor Operations Planning. Review, evaluate and make recommendations for lowering risk in contractor designs, plans, control, schedules, processes, activities, resources, testing, equipment, facilities, documentation, and other activities needed to meet requirements. This pertains to a contractor's planning for systems development, production, assembly, delivery, launch, deployment and operation.
- 2. Reviews and Evaluation of Contractor Operations. Review, evaluate, participate in, and make recommendations for, the lowering of risk in contractor operations. This includes the contractor's execution of plans, designs, schedules, cost, processes, control, and the deployment of resources (including support equipment and facilities). These also include contractor's activities such as tests (including configuration item acceptance, qualification and readiness) and test data reviews, other major reviews (including design and readiness reviews), and documentation. This includes reviewing, evaluating, participating in, and making recommendations for, activities that lower the risk of not satisfying system and mission requirements during the contractor's development, production, assembly, delivery, launch, deployment and operation of the system or system-of-systems. This activity may include the development and execution of independent testing and evaluation where required.

VII. Review and Evaluation of Integration

Review and Evaluation of Interfaces and Interface Integration. Review, evaluate, participate in, and make recommendations on, the identification, assessment, design, fabrication, integration and control of all major, critical and/or significant risk interfaces of the system or

system-of-systems. These include interfaces within interacting systems, systems-of-systems, systems segments, deployment systems and facilities, operations systems and facilities, components and parts and between systems and the operating environments. All of this activity is done to meet mission and system requirements.

VIII. Test and Operational Support

- 1. Operations Technical Support. Provide technical support to all aspects of test and operations activities as required or appropriate. These activities could include, but are not limited to:
 - Planning and execution of the pre-launch, launch, post-launch, and orbital operation phases of space system missions
 - Pre-operational testing and operations of ground systems
 - Pre-operations testing and operations of information systems;
 - Planning for, testing, and implementation of operational software and its modifications
 - Planning for and participation in operational training and rehearsal activities.
- 2. Operations Review and Evaluation. Review and evaluate various aspects of test and operations activities as required or appropriate. These activities could include (but are not limited to) review and evaluation of:
 - Operations planning and execution activities of the Customer or Contractors
 - Mission planning and execution activities of the Customer or Contractors
 - Test requirements, plans and procedures, along with the preparation for and execution of tests
 - Flight test data
 - Vehicle commanding
 - Anomalies and corrective action
 - Proposed operational and test software changes
 - The state of adequacy of support facilities and equipment.
- 3. Operations Related Documentation. Prepare documentation, as required or appropriate, to support test and operations efforts. This could include (but is not limited to):
 - Developing a list of flight test documentation necessary to satisfy program and range requirements, noting coordination with the appropriate range or agency and identifying and recommending the documentation preparation responsibility
 - Preparing the range safety reports utilizing contractor inputs, or documenting technical requirements for the range safety reports
 - Preparing, for Customer approval, system test objectives documents, or provide technical requirements for such documents, for each flight test, utilizing contractor inputs
 - Providing written concurrence, comments and recommendations to the launch test directives, orbital support plans, and other critical operations documents.
- B. Technical Review (TR)

The TR category of effort is applied to those programs or projects that do not require the full scope of GSE&I, for example, when initial system definition is not needed. TR is a subset of the GSE&I responsibility involving any of the task categories A.I through A.VIII above. Appraising the technical performance of contractors is an important aspect of TR. If appraising contractor performance is not required, Technical Support would be a more suitable category of effort.

C. Technical Support (TS)

TS deals with broad areas of specialized needs of customers' planning, system architecting, research and development, horizontal engineering, or analytical activities for which the Aerospace FFRDC is uniquely qualified by virtue of its specially qualified personnel, facilities, or corporate memory. The following are the five categories of TS tasks.

1. Selected Research, Development, Test and Evaluation (SRDT&E)

Perform research, development, test, and evaluation activities, including the assessment of mission performance of space systems, for which the Aerospace FFRDC is uniquely qualified because of the availability of specially qualified personnel, special facilities, or background information obtained in support of other Air Force activities. SRDT&E includes experimentation, test and analyses in the sciences and technologies critical to space and space-related systems.

2. Plans and System Architecture (P&SA)

Provide space system development planning support to SMC and other DoD agencies to provide future effective and secure military space systems and system of systems that will satisfy user operational requirements. For example, the P&SA development planning function includes: providing near term integrative planning support for SMC and other DoD agency studies and planning for the evolution of current systems, as well as ad hoc studies of current issues in support of SMC and other DoD agencies; developing and evaluating systems and system-of-systems architecture that will provide a time phased plan for meeting the development goals; and supporting systems and system-of-systems planning that will define initial system characteristics for future space systems and systems of systems. This (P&SA) effort also includes the definition of system and system-of-systems requirements and concept definition; specification of system characteristics and overall system definition; and cost/benefit studies for new or modified systems along with the necessary inter-operability considerations inherent in such systems.

3. Multi-Program Systems Enhancement (MPSE)

Provides team action in performing horizontal and cross system systems engineering and integration involving ground, launch, space, support systems and their related interfaces for all Government space systems. Included under this category are: efforts to review, analyze, develop and disseminate critical information in the areas of:

- Multi-systems engineering, engineering policy and resources, technical lessons learned, reliability, maintainability, standardization, interoperability, radiation hardening, parts engineering, parts policy, testing, productivity, manufacturing, quality assurance and engineering, life cycle cost, design-to-cost analysis and lessons learned, cost-as-an-independent-variable analysis and lessons learned value engineering, systems engineering, software engineering, integrated logistics, support equipment analysis, documentation resource analysis, computer resources, transportability, human factors engineering, electromagnetic compatibility, systems security, and other areas involved in the systems acquisition support process
- The tracking of program failures, anomalies and corrective actions
- Risk assessment, identification of risk trends, and recommendations for future risk avoidance
- Maintenance of appropriate databases
- Acquisition training support.

Multi-program engineering tasks generally in support of organizations using the SMC contract such as SMC/CC, SMC/CV, SMC/AX, SMC/SY, and some organizations within AFSPC and the NRO are also included in this task area. Each task area will be assigned to the appropriate organization for management oversight.

4. International Technology Assessment (ITA)

Provide foreign technology data and intelligence and threat analyses to SMC and other DoD agencies in support of their planning and development efforts. This activity shall provide supporting analytical and evaluation programs and techniques, and provide detailed evaluations, studies, and presentations resulting from the exploitation and analysis of applicable foreign scientific and technical data.

5. Acquisition Support

Acquisition support spans both pre-award and post-award activities in support of Air Force and other government agencies. Pre-award acquisition activities involve assisting in the review, evaluation, and/or preparation, and providing recommendations as appropriate, on acquisition related and program critical documents and processes. These could include but are not limited to: Requests for Proposals (RFPs) and RFP Packages, specifications, technical standards for source selection, Statements of Work or Objectives, Contract Data Requirements List, unsolicited proposals, etc. Pre-award acquisition support may also include advising and/or evaluating during source selection (FAR 37.203(d)(2) and AFAS 15.303-30(f) and (g)). Post-award activities involve providing the necessary skills mix to gain insight into Contractor activities, evaluating their technical performance in accordance with the issued contract, performing independent trade space analyses on matters of technical concern, providing intellectual guidance and/or analyses on matters pertinent to Government decision-making, and performing independent product readiness reviews.

ANNEX 3

20 January 2004

Process Instruction to Place FFRDC Work on the Air Force/Aerospace Corporation FFRDC Contract

Annex 3

PROCESS INSTRUCTION TO PLACE FFRDC WORK ON THE AIR FORCE/AEROSPACE CORPORATION FFRDC CONTRACT

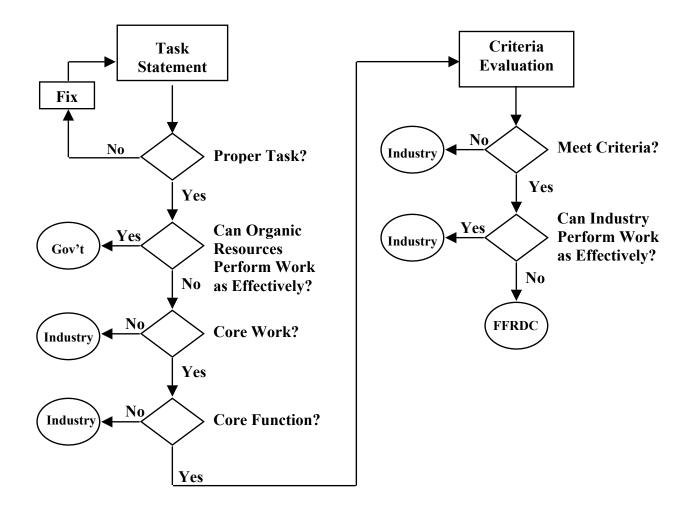
- 1. The purpose of this Annex is to outline the procedures to request, approve, and place FFRDC work from both DoD, non-DoD and non-profit organizations on The Air Force/Aerospace Corporation FFRDC contract through the Technical Objectives & Plan (TO&P) process. Each year, SMC/AX issues an Annual Call. The data collected during the Call is used to revalidate the requirements and to place the efforts on contract for the next fiscal year.
- 2. Because of intense scrutiny by Congress, OSD, DDR&E, the Defense Science Board and SAF/AQ of FFRDCs, the following procedures must be followed by all organizations requesting Aerospace FFRDC support. The Decision Tree for Task Allocation (<u>Attachment 1</u>) is a flow chart of the certification process for FFRDC tasks. Each task on the TO&P will be reviewed by the requesting government official and SMC/AX against the following questions in order to determine if it is proper work for an FFRDC.
 - 1. Is the task a proper FFRDC task? That is, is this work that the government organization really needs performed by an FFRDC? Is the task properly described in the Scope of Work section on the TO&P form and does it conform to one of the categories of tasks listed in the Users Guide Annex 2 A-C?
 - 2. Can organic resources perform the task as effectively? Is the task DDR&E Core Work (<u>Attachment 2</u>)? Is the task one or more of the permitted Systems Engineering FFRDC Core Functions?
 - 3. Is the task justified as an effort satisfying one or more of the eleven SMC FFRDC Justification Criteria?
 - 4. Can other not-for-profit or for-profit industry (e.g., a SETA company) perform the work as effectively as the FFRDC and meet the criteria? If so, an FFRDC is precluded from doing the work.
- 3. To certify the above process, each requesting government program official must include the following certification statement on each TO&P:
 - I, the Air Force SPO/Agency Representative, certify that the Staff Years of Technical Effort (STE) that I am requesting from The Aerospace Corporation have been reviewed and the effort described herein is in full compliance with the applicable acquisition procurement statutes, policies, and regulations for non-competitive actions. I certify that the work needs to be performed and: (1) is consistent with the FFRDC's mission, purpose and capabilities; (2) is consistent with DoD's needs as reflected in the FFRDC's core competencies; (3) is consistent with the strategic relationship between the FFRDC and its sponsor; (4) that the criteria for assessment of work to the Aerospace FFRDC (reference: SMC FFRDC Users Guide, Annex 3) have been applied and validated, (5) that all tasks fall within the ten (10) Systems Engineering FFRDC

Core Functions and (6) cannot be performed as effectively by existing in-house, other not-for-profit, or for-profit contractor resources.

4. An example of the Annual Call Tasking Letter is provided in <u>Attachment 3</u> of this Annex along with procedures and attachments that accompany the letter.

Annex 3 Attachment 1

DECISION TREE FOR TASK ALLOCATION



Attachment 2

DDR&E CORE WORK FOR FFRDCs: CORE WORK & CORE COMPETENCY DEFINITIONS FOR AEROSPACE

This attachment describes the character of the core work conducted by The Aerospace Corporation's systems engineering Federally Funded Research and Development Center (FFRDC)--hereafter referred to as the Aerospace FFRDC--sponsored by the United States Air Force. (Reference: DDR&E document dated December 1, 1995 entitled Federally Funded Research and Development Centers Core Definition Statements and Program Review).

Core work is defined as that which is appropriate for the Aerospace FFRDC in pursuit of Aerospace's mission and charter to support the USAF and U.S. Government, and in light of the strategic relationship maintained between the Aerospace FFRDC and the USAF. This systems engineering work is: (1) consistent with the Aerospace FFRDC's mission, purpose, and capabilities; (2) consistent with the USAF's need for Aerospace FFRDC support as reflected by the core competencies that the Aerospace FFRDC maintains; and (3) consistent with the FFRDC special relationship with the USAF.

Aerospace Mission

The Aerospace FFRDC's mission is to support the USAF and the U. S. Government. The mission involves applying the full resources of modern science and technology to achieve continuing advances in military space and space related systems which are basic to national security; to provide the USAF's space efforts with an organization which is objective, possesses high technical competence, and is characterized by permanence and stability; to provide a vital link between the U.S. Government and the scientific and industrial organizations in the country with a capability and an interest in the space field; and, through its unique role, to help to ensure that the full technical resources of the nation are properly applied to developing highly reliable and cost effective space and space related systems, and that the potential advances in the space field are realized in the shortest possible time.

Aerospace Core Capabilities and Competencies

The Aerospace FFRDC provides support not available from the USAF's in-house technical and engineering capabilities. This support assists with the creation of and choice of space system concepts and architectures; the specification of technical space system and subsystem requirements and interfaces; the development of and acquisition of space system hardware and software; the testing and verification of performance; the integration of new capabilities and continuous improvement of system operations and logistics; and the technical formulation, initiation, and evaluation of space programs and activities undertaken by firms in the for-profit sector supporting the USAF.

After a development program is initiated, the Aerospace FFRDC supports the USAF through technical review, monitoring and steering of industry efforts, consistent with the economical and timely accomplishment of program and mission objectives. The Aerospace

3-4

FFRDC ensures that technical deficiencies and weaknesses are isolated, and that the impact of new data, new developments, and modified requirements on total systems concepts, technical performance, and cost and schedule are properly assessed, and that appropriate changes are promptly introduced.

The Aerospace FFRDC provides two levels of systems engineering for space systems: (1) integration of subsystems and system segments into complete systems; and (2) the integration of each system into the overall system of all national security space systems, optimizing interoperability, performance, risk, resilience, and standardization. This integration process extends from initial engineering feasibility studies and conceptual design, through hardware development and operations to mission termination. It encompasses satellites, launch vehicles, ground systems, and their integration to meet total mission requirements.

The Aerospace FFRDC's capabilities are the result of the unique, long-term support relationship established with the USAF described above, and the ability of this support workforce to provide the following characteristics:

- broad and deep working knowledge of all aspects of space technologies, including commercial, USAF, civil, DoD, and those that have been developed internationally
- detailed knowledge of a broad array of space systems currently in use, being upgraded, or in development
- intimate familiarity with the application of the underlying engineering processes for architectures, acquisition, systems migration and operational test and evaluation
- thorough understanding of the operational role played by the overall space system
- widespread and substantial involvement with national security developers, users and fielders of space systems

The Aerospace FFRDC provides the following core competencies:

<u>Launch Certification</u>: The Aerospace FFRDC provides an independent launch readiness verification of the launch system design, payload integration, launch system analyses, hardware qualification and acceptance testing, software development and final overall launch processing. Aerospace provides a formal launch readiness assessment input to the SMC/CC's launch certification process.

Systems of Systems Engineering: The Aerospace FFRDC provides the architecture planning and development, internal and external interface analysis, modeling and simulation analysis, and independent testing necessary to support the development of space systems.

<u>Systems Development and Acquisition</u>: The Aerospace FFRDC provides operational requirements analysis and evaluation, mission threat analysis, risk assessment, and technical performance analysis and assessment to support acquisition planning, program preparation and evaluation, test planning and evaluation, and program milestone and design reviews for all space systems.

<u>Process Implementation</u>: The Aerospace FFRDC provides technical expertise to support acquisition reform initiatives such as military specifications and standards reform, development and evaluation of critical processes, as well as to support proof-of-concept prototyping in support of space systems.

<u>Technology Application</u>: The Aerospace FFRDC provides state of the art assessments of technology opportunities, alternatives, and risks to support the application of new technology in current or developing space systems

Aerospace's Special Relationship with the United States Air Force

The special relationship between the USAF and the Aerospace FFRDC was established and is maintained to bring private sector expertise to the systems engineering efforts of the USAF that cannot be carried out as effectively in-house or by for-profit contractors. The special relationship has the following characteristics:

<u>Objective, High-Quality Work</u>. The Aerospace FFRDC is required to maintain an exceptionally competent staff and to produce consistently objective, high-quality work.

<u>Freedom from Real or Perceived Conflicts of Interest</u>. The USAF requires the Aerospace FFRDC and The Aerospace Corporation to be independent of commercial, shareholder and other associations that could lead to real or perceived conflicts of interest.

Broad Access to Information. The Aerospace FFRDC 's work is fully informed by access to sensitive government information and to proprietary data from industry.

<u>Comprehensive Knowledge of Sponsor Needs and Problems</u>. The USAF requires the Aerospace FFRDC to maintain a comprehensive knowledge and expertise in the core areas described in this paper, providing corporate memory on long-term systems issues.

<u>Long-Term Continuity</u>. The special relationship between the Aerospace FFRDC and USAF was expected to be and has been long-term. The relationship was established and has been continuous since 1960.

<u>Technical Link</u>. The Aerospace FFRDC provides the technical link between the USAF space program and the other scientific and industrial organizations worldwide that affect the future of the national security space program.

Summary

Core systems engineering work is defined by the combination of Aerospace's mission, Aerospace's core capabilities and competencies, and the FFRDC special relationship maintained between Aerospace and the USAF. Aerospace conducts core work for the USAF and other Department of Defense agencies. The Aerospace FFRDC does conduct core work for non-DoD

Attachment 2

entities when appropriate and when it is directly related to the core areas defined herein and when it is supportive of national security goals; this work is conducted subject to the review and approval process described in Aerospace's Sponsoring Agreement and Space and Missile Systems Center FFRDC Users Guide.

Annex 3 Attachment 3

EXAMPLE OF SMC/AXC ANNUAL CALL TASKING LETTER

13 March 2003

MEMORANDUM FOR AEROSPACE FFRDC CUSTOMERS

FROM: SMC/AXC

2420 Vela Way, Suite 1467 El Segundo CA 90245-4659

SUBJECT: FY04 "Annual Call" Aerospace Staff Year of Technical Effort (STE) Support Requirements

- 1. I request that all organizations with a FY 2004 Aerospace FFRDC STE requirement document that requirement in accordance with the **SMC FFRDC USERS GUIDE** and submit that documentation to SMC/AXC not later than **18 April 2003**. Procedures to complete the documentation are outlined in the attachments to this letter.
- 2. "Annual Call" inputs are to be addressed to:

SMC/AXC Attn; Paul Kocincki 2420 Vela Way, Suite 1467 Los Angeles AFB El Segundo CA 90245-4659 (Paul.Kocincki@LosAngeles.AF.MIL)

3. Please direct any questions to Paul Kocincki at extension (310) 363-2533 or DSN 833-2533. FAX: (310) 363-1759 or DSN 833-1759 or email (Paul.Kocincki@LosAngeles.AF.MIL).

// signed //
Kurt A. Johnson, GM-14
Deputy Director, Acquisition Support Contracts

Attachment:

SMC FFRDC USERS GUIDE - ANNEX 3

(Procedures for "Annual Call" Aerospace STE support requirements)

AEROSPACE FFRDC FUNDING PROCEDURES

The following Guidance is provided for the submittal of Funding Documents to SMC/AXC

- 1. Each Funding Document will be for one (1) Job Order Number (JON) only. **The applicable JON shall be identified on the Funding Document**
- 2. Each basic Funding Document (plus amendments) will contain only one (1) Fund Cite.
- 3. **Each new FY requires a NEW Funding Document;** i.e. do not submit amendments to prior year documents for a new fiscal year or Funding Documents covering more than one (1) fiscal year.
- 4. Excess funding will be unilaterally returned to customers after a final adjusted FY bill is received from The Aerospace Corporation.
 - a. This will be in the November time frame.
 - b. Funding may be resubmitted on a new document for the next FY. Prior year, **ACTIVE** funds may be used in the current year, however, they must be on a **new**, **unique and separate document**. Special instructions for billing should be submitted on the Funding Document. If there are no special instructions, then multiple funded JONs will be billed in the following order: O&M, then RDT&E, and then Procurement.
- 5. Prompt funding for the **TOTAL** dollar amounts for each JON specified on the Plan are required "Up Front", NOT **IN INCREMENTS**.
 - a. JONs will **NOT BE OPENED/REOPENED** for Aerospace FFRDC customers **owing funds for prior years work completed**. These customers will receive a separate notification of their status.
- 6. Funding for the Aerospace Support STE/JON cost is to be submitted to:

SMC/AXC

2420 Vela Way, Suite 1467 El Segundo, CA 90245-4687 Attn: Betty Burgess

Phone: 1-310-363-0617 Fax: 1-310-363-1759

Attachment 3

PROCEDURES FOR ANNUAL CALLS FOR AEROSPACE STAFF YEARS OF TECHNICAL EFFORT (STE) SUPPORT REQUIREMENTS

- 1. The purpose of this memo is to outline the administrative procedures for requesting Aerospace support.
- 2. SMC/AXC issues one Aerospace STE support "call" each year to organizations supported by Aerospace for the next FY's planning. **The Annual Call is issued in March each year.**

Each response to the Annual Call must include two items:

- 1. A completed Technical Objectives & Plans (TO&P) form. This is SMC Form 1640 JAN 02. It shall be prepared per the SMC FFRDC Users Guide and signed by both the requesting government official and The Aerospace Corporation representative. The TO&P preparation instructions can be found in Attachment 1 of the SMC FFRDC Users Guide. Annex 2 of the SMC FFRDC Users Guide defines the General Systems Engineering & Integration (GSE&I), Technical Review (TR), or Technical Support (TS) work that Aerospace performs. These are the only categories of effort that shall be noted on the TO&P.
 - 2. An Estimate of STE Usage For Each Systems Engineering FFRDC Core Functional Task for each TO&P/Job Order Number (JON). (See Attachment 4 for the definitions of the ten (10) Core Functions.)
 - 3. An Aerospace STE/Funding Summary statement identifying the funds for each TO&P/JON for the requested effort. Do not submit estimates of STE requirements unless funding is identified to cover the cost of the effort requested.
 - 4. FY04 & Five-Year STE forecast (FY05 FY09) of requirements for each TO&P/JON.
 - **5. Impact Statement**. Provide a statement explaining how the STE requested for your program(s) will be utilized and any impact to your program(s) if the total STE requested to meet your requirements is not provided. (Required for DoD customers only.)
- 4. **FFRDC USERS GUIDE WEBSITE:** http://ax.losangeles.af.mil/axc/ or //ax.losangeles.af.mil/chief_engineer/ffrdcug.pdf

5 Attachments:

- 1. Technical Objectives And Plans (TO&P) Preparation Instructions
- 2. SMC Form 1640 JAN 02 (TO&P)
- 3. STE Summary, Funding & Impact Statement
- 4. Systems Engineering FFRDC Core Functions (Core Functions Definitions)
- 5. Justification Criteria

Attachment 3

EACH TO&P SHALL INCLUDE THE FOLLOWING IN THE HEADER:

INSTRUCTIONS FOR: SMC Form 1640, JAN 02, TO&P Form

TO&P form automatically highlights the **Title** box. Type title directly into highlighted box. Use **TAB** key to navigate through the form. Type applicable text in highlighted boxes **or** use **Pull Down** menu as required.

The **HEADER** text will automatically fill in from page 1 to any additional pages when printed.

SIGNATURE BOXES MUST REMAIN AT THE BOTTOM OF PAGE 1.

To type additional text in Section 4, use the **TAB** key to go to page 2, (Section 4), and begin typing in the highlighted text box. Section 4 on page 2 will automatically expand into additional pages as needed.

<u>CORRECTIONS</u> can be made to any text box by placing the cursor on the text box **or** by navigating with the **TAB** key to the text box and begin typing.

TITLE: Indicate short title of effort covered by the TO&P.

<u>DATE ISSUED:</u> LEAVE BLANK. To be filled in at time of publication.

CONTRACT NUMBER: Current Contract Number is filled in automatically on each page.

<u>CATEGORY:</u> There are 3 Categories of Effort. See Annex 2 of the FFRDC Users Guide for an explanation of these categories of tasks. This shall be noted on the TO&P as one of the following:

- (a) "GSE&I" (for General Systems Engineering and Integration)
- (b) "TR" (for Technical Review)
- (c) "TS" (for Technical Support) Sub-categories of effort such as: SRDT&E; P&SA; MPSE; ITA; and Acquisition Support shall all be designated as "TS."

JOB ORDER NUMBER(S): List Job Order Number(s) covered by the TO&P.

ISSUE: Select "**Original**" for TO&Ps that respond to the Annual Call or describe a new effort. Use "**Revision**" for changes made during the Fiscal Year to a signed TO&P original.

- **1. PROGRAM OBJECTIVES:** Briefly describe the **Air Force's (or other sponsoring agency's)** broad objectives for this effort. This is not a description of the objectives of the Aerospace efforts.
- 2. PROGRAM MANAGEMENT: Identify Air Force SPO/Agency personnel responsible for managing the effort. Identify names, mailing addresses, telephone numbers and email addresses of both the technical and financial points of contact for this TO&P.
- 3. CONTRACTORS: DO NOT ALTER TO&P TEXT.
- 4. SCOPE OF AEROSPACE WORK: Define the scope of Aerospace work by citing and listing the tasks that require major emphasis. Specific exceptions will also be stated here. All categories of work specific tasks should be listed. Use the description/definition of categories of tasks contained in the SMC FFRDC Users Guide, Annex 2, as applicable. The tasks should sufficiently define the work so that the responsible Air Force and Aerospace personnel can, within the normal working relationship, carry out their assignments. Identify task descriptions by JON when the TO&P lists more than one JON. Terminology such as "as requested" shall not be used in the TO&P. Procedural, administrative or financial information shall not be included.
- <u>5. SPECIAL REQUIREMENTS:</u> List special requirements for CDRL reports or facilities, etc. for **each TO&P/JON**, if applicable. Otherwise note "**NONE**" or "**N/A**" in this section.
- 6. LEVEL OF EFFORT: DO NOT ALTER TO&P text.
- 7. COMPLIANCE WITH REGULATORY REQUIREMENTS: DO NOT ALTER TO&P text.

SIGNATURE BLOCKS: Customer and Aerospace Level 4 representatives print name, sign, and date the first page of the TO&P. The Air Force Contracting Officer and a representative from The Aerospace Corporation's Contracts organization shall sign and date the first page of the TO&P to show the mutual agreement and approval for publication/distribution.

TECHNICAL OBJECTIVES AND PLANS - FY 2004				
TITLE				
	TILE		DATE ISSUED (Leav	ve Blank)
CONTRACT NUMBER	CATEGORY Choose One:		ISSUE Choose One:	Pg 1 of Pgs
INSTRUCTIONS (ref. SMC FFRDC Users	Guide)			
1. <u>PROGRAM OBJECTIVE</u> : The	e program objectives for the	indicated Air Force SPC	O/Agency are as follows:	
2. <u>PROGRAM MANAGEMENT</u> :				
	Technical POC:	<u>Fina</u>	ncial POC:	
Name				
Title				
Office Symbol				
Street Address City, State, Zip			_	
Telephone # (DSN if applicable)			_	
FAX				
email address				
4. SCOPE OF AEROSPACE WORK: All work assigned to Aerospace con SMC FFRDC Users Guide, Annex 2	forms with the standards for 2. Tasks to be performed and	r the above indicated Care as follows:	tegory of Effort tasks as	
PROGRAM/PROJECT OFFICE COORDINATION				
AIR FORCE SPO/AGENCY REPRESENT Signature & Date)	CATIVE (Print Name,	AEROSPACE PROG Signature & Date)	RAM/PROJECT OFFIC	E (Print Name,
Print Name:		Print Name:		
Sign & Date:		Sign & Date:		
MUTUAL AGRE	EMENT AND APPROVAI	L FOR PUBLICATION/	DISTRIBUTION	
AIR FORCE CONTRACTING OFFICER	(Signature & Date)	THE AEROSPACE C	ORP (Signature & Date))
Sign & Date:		Sign & Date:		

SMC Form 1640, JAN 02 REPLACES SMC FORM 1640, FEB 00, WHICH IS OBSOLETE.

TECHNICAL OBJECTIVES AND PLANS - FY 2004				
TITLE				
		J.O. NUMBER(S)	DATE ISSUED (Leave Blank))
CONTRACT NUMBER	CATEGORY Choose One:		Choose One:	Pg 13 of Pgs
INSTRUCTIONS (ref. SMC FFRDC Users Guide)				

- 4. <u>SCOPE OF AEROSPACE WORK</u>: (Continued from page 1)
- 5. <u>SPECIAL REQUIREMENTS/CDRL Requirements</u>: (List special requirements for CDRL reports or facilities, etc. for each TO&P/JON, if applicable. Otherwise note "NONE" or "N/A".)
- 6. <u>LEVEL OF EFFORT</u>: The level of effort is as agreed to and recorded in the contract files of Aerospace and SMC.
- 7. COMPLIANCE WITH REGULATORY REQUIREMENTS:

I, the Air Force SPO/Agency Representative, certify that the Staff Years of Technical Effort (STE) that I am requesting from The Aerospace Corporation have been reviewed and the effort described herein is in full compliance with applicable acquisition and procurement statutes, policies and regulations for non-competitive actions. I certify that the work needs to be performed and: (1) is consistent with the FFRDC's mission, purpose, and capabilities; (2) is consistent with DoD's needs as reflected in the FFRDC's core competencies; (3) is consistent with the strategic relationship between the FFRDC and its sponsor; (4) that the criteria for assignment of work to the Aerospace FFRDC (reference: SMC FFRDC Users Guide, Annex 3, Attachment 4) have been applied and validated; (5) that all tasks fall within the ten (10) SAF/AQ FFRDC Core Functions and (6) cannot be performed as effectively by existing in-house, other not-for-profit, or for-profit contractor resources.

SMC Form 1640, JAN 02

REPLACES SMC FORM 1640, FEB 00, WHICH IS OBSOLETE.

STE SUMMARY AND FUNDING

FY04	SPO/Agency	JON	

ESTIMATION OF STE USAGE FOR EACH SYSTEMS ENGINEERING FFRDC CORE FUNCTIONAL TASK

Core Function		CTE
Function		STE
1	Systems Architecture Planning and Development	
2	Operational Requirements Analysis and Evaluation	
3	Integration Management	
4	Mission and Threat Analysis	
5	Technical Performance Analysis and Assessment	
6	Acquisition Planning, Preparation, and Evaluation	
7	Program Milestone, Design and Readiness Reviews	
8	Technology Requirements, Applications and Research	
9	Program Systems Engineering	
10	Monitoring Launch Vehicle & Satellite Processing and	
	Certifying Launch Readiness	
		·
TOTAL		

AEROSPACE STE/FUNDING SUMMARY

Program	Program	Appropriation	Category	STE Funding
Element	Element	Type	(GSE&I, TR, or TS)	Available
No.	Title			

FY04 PLUS FIVE-YEAR STE FORECAST

FY04 FY05 FY06 FY07 FY08 FY09

Total STE Requested

IMPACT STATEMENT: (**Required for DoD programs only.** Provide a statement explaining the impact to your program(s) if the total requested STE is not provided. Be specific about the tasks that would not be performed and, if applicable, the associated impact or risk to program milestones.)

SAF/AQ FFRDC CORE FUNCTIONS

(Core Function Definitions)

- 1. Systems Architecture Planning and Development: Includes items such broad concepts studies, systems opportunities, systems roadmaps and supporting technology roadmaps. Particular emphasis on "system of systems" approaches and interoperability and joint operations. Create reference designs for purposes of analysis and program planning.
- 2. Operational Requirements Analysis and Evaluation: Iterative requirements analysis and flowdown with the customer. Matching program technical requirements with mission requirements. Resolution of conflicting requirements. Evaluation of the degree of mission accomplishment in either a simulated or planned operational environment.
- **3. Integration Management:** Independent analysis and evaluation of systems internal and external interfaces. As part of the system of systems approach, it includes interaction among associated systems.
- **4. Mission and Threat Analysis:** Analysis of existing and potential missions as well as existing and potential threats to support the development of products and processes for operational use. Independent analysis and exploitation of intelligence products for systems. Threat assessment packages tailored to program life cycle needs.
- **5. Technical Performance Analysis and Assessment:** The continuing verification of the degree of anticipated and actual achievement of a technical parameter. Independent analysis/detection of design flaws and technology problems with resolution alternatives (physical process) tailored to program needs.
- **6.** Acquisition Planning, Preparation, and Evaluation: This includes support in preparation of solicitation documents (source selection plan, RFP, technical requirements documents, WBS, etc.) and provision of technical advisors to source selection. Specific activities include evaluation of contractor's proposal and required documentation as required by the Air Force to accomplish the requirements selection criteria for the system, subsystem or task.
- 7. Program, Milestone, and Design and Readiness Reviews: Includes all formal and informal technical reviews and milestones such as SDR, PDR, CDR, etc.. These may be conducted incrementally or at major review points. Support includes review of deliverables, independent analysis as required and ATP recommendation. Includes reviews conducted to ensure the system is ready for its next phase of development. Also includes independent reviews used to ensure that the configuration item of a system is either ready for testing, ready for production at he completion of Engineering and Manufacturing Development, or in the case of space systems, launch, missions or systems operations.
- **8. Technology Requirements, Applications, and Research:** State of the art assessments. Assessment of technology opportunities. Technology alternatives and risk assessments versus program needs. Selective, specialized, in-depth analysis and state of the art improvements in critical, system technologies. Mission oriented investigation and experimentation (MOIE). Evaluations of the application of available technology to development programs.
- 9. Program Systems Engineering: Includes requirements development, systems engineering planning, and establishing and supporting processes for integration of requirements flowdown, performance, and design alternatives. Analysis and insight into subsystem and system design and integration, requirements flowdown, design, performance and cost trades. Cross systems integration between programs, lessons learned, technology commonality and other items. Includes independent analysis and evaluation of systems interfaces and functions as required to assure system integrity and reliability.
- 10. Monitoring Launch Vehicle and Satellite Processing and Certifying Launch Readiness:

 Validation of in-line processing of flight hardware. Adequacy of projected range support. Formal certification of adequacy of processing and readiness for flight, including review of all launch safety issues and validation of issue resolution. Additional support to mission and launch readiness reviews.

SMC FFRDC JUSTIFICATION CRITERIA

Criteria To Determine If A Given Task Should Be Assigned To The Aerospace Corporation As Part Of Its FFRDC Responsibilities: The following criteria have been established by AFMC as factors in determining if the circumstances are appropriate for assigning an effort to Aerospace. Requests for Aerospace support must include justifications that describe how these criteria are applicable to the program seeking support. Although some of the following eleven (11) criteria may overlap, they are described individually for clarity and to indicate a relative order of importance. One or more of the criteria suffices for justification for assignment of a task to The Aerospace Corporation as part of its FFRDC Responsibilities.

- (1) Freedom from Bias due to Predilection for Design, Hardware and Software, or Approach. It is important to the DoD that objectivity be retained in design, choice of off-the-shelf hardware and software, choice of hardware from competing contractors, selection of hardware as influenced by possible subsequent production opportunities, preparation of specifications, etc. A hardware or software producing company is likely to have a predilection for a particular design or product, or a particular manufacturing or management approach. Where such a company has to make a choice between competing contractors, bias is difficult to eliminate.
- (2) Need for State-of-the-Art Information from Government Laboratories and Universities. A task may require extensive knowledge of the state-of-the-art as developed in universities, government laboratories, etc. Such knowledge, of course, is available to industry but is not necessarily used since industry tends to specialize in particular fields of interest consistent with its best competitive position. Assignment of the task to industry or to Aerospace could be governed by the extent to which applicable knowledge of the state-of the art is to be found in these sources.
- (3) Extent of Access to DoD Planning Information. A broad need-to-know is requisite to the execution of advanced planning and integration of proposed systems with existing systems. Extensive and complex integration of requirements, and close liaison with systems users, is necessary in the early conceptual studies, initial analyses, and design stages leading to program definition or acquisition. Bringing individual contractors for the different projects into conceptual planning, and extending general access across DoD programs would, except under unusual circumstances, give the contractors an unfair advantage over competitors because of information gained on programs related to the one on which the contractor performed. On the other hand, too broad a restriction on procurement eligibility may make the contractor reluctant to participate in the planning role. However, if the task is not unduly complex and can be well defined to minimize access to such planning information, and if procurement restrictions are acceptable, the task may be given to industry.
- (4) Extent of Access to Intelligence. Multiple projects, involving many individual contractors would require the wide dissemination of such information. To avoid charges of favoritism, access would have to be granted to all contractors having the capability to bid.

Attachment 3

Providing this intelligence to Aerospace, however, limits its distribution within reasonable bounds and permits technical support consistent with, and fully evaluated in terms of long-range plans and goals and other sensitive information.

- (5) Need for Industry Proprietary Information. Proprietary data concerning designs, manufacture and processes are very important to industry. Contractors are reluctant to part with proprietary data necessary for interface management to a contractor who is studying or advising on a system for a procurement agency. Where such needs for proprietary data are minimal, or where problems concerning access to such data are not significant, this criterion could be of minor importance. Aerospace can lessen proprietary problems materially when the problems are serious and the interface is complex.
- (6) Access to Industry Proposals. Some tasks require review of industry proposals, reduction of data contained in a common base, and selection of the best approaches. It is generally inappropriate to give planning or program definition studies, or contractor proposals, either unsolicited or in response to invitations, to industry for technical evaluation. Industry should not have access to this information nor be involved in establishing technical criteria involved in decision-making.
- (7) Need for Extensive Background Information. Some tasks require drawing heavily on previous experience or background that any one industrial concern could not normally have unless it had participated in a number of programs to the exclusion of other contractors.
- (8)Need for Diversified Skills. The task may require extensive diversified special skills not readily available to any one contractor. It may be necessary to maintain inordinate control over the contractor through the associate mechanism. Where management problems for the associate contractors are minimal, industry could be qualified to meet this criterion.
- (9) Need for Outstanding Specialists in Specific Fields. For certain tasks, one or more state-of-the-art considerations may be of overriding importance, and the whole project may hinge on the availability of technical competence in a specified field. Such competence may exist uniquely at Aerospace by virtue of its primary program mission and the cross-feed of information and experience and knowledge among similar programs. However, industry may also have such outstanding specialists, and where this situation exists, appropriate tasks should be assigned to industry, not to Aerospace simply because it is convenient. In such cases, Aerospace may perform in a subsystem or research and engineering role.
- (10) Continuity of Effort. Continuity of effort on a single system from conceptual and advanced planning through initial system engineering and specification provides a degree of design coherency and consistency that cannot be obtained as effectively in any other way. It may not be desirable to involve industrial contractors under these conditions because of the difficulty in maintaining continuity without giving unfair competitive advantages, or unwarranted access to intelligence data.
- (11) Need for Large Special Facilities. Some tasks require specialized facilities. Obviously such installations cannot be provided to all contractors interested in bidding on a program and making such a facility available to any one contractor would give unfair competitive advantage. Duplication would not be in the Government's best interest.

ANNEX 4

20 January 20 2004

Process Instructions to Place Non-DoD FFRDC
Work on Direct Contract for Performance by the
Aerospace FFRDC

PROCESS INSTRUCTION TO PLACE NON-DOD FFRDC WORK ON A DIRECT CONTRACT FOR PERFORMANCE BY THE AEROSPACE FFRDC

Purpose

- a. The purpose of this Annex is to outline the procedure to be used to place non-DoD FFRDC work on direct contracts to be performed by the Aerospace FFRDC. Procedures for placing FFRDC work on the SMC contract are contained in Annex 3 of this Users Guide. The circumstances that justify using an FFRDC on a sole-source basis are outlined in the FAR (FAR 6.302-3). That FFRDC sole-source justification is used for all FFRDC work, whether added to the SMC contract or directly contracted with The Aerospace Corporation (Aerospace) for performance by the Aerospace FFRDC. If the FFRDC sole-source justification is not used by the potential federal contracting entity, then the work is not appropriate for the Aerospace FFRDC. Non-federal users may ignore this requirement, but should indicate the work was not competed.
- b. As is stated in the DoD FFRDC Management Plan, work may only be accepted from DoD, other Government entities, state and municipal governments, and not-for-profit activities.
- c. The DoD FFRDC Management Plan also states that such work must be Core Work. Core Work is defined as work that is consistent with the mission, purpose, and competencies of the FFRDC, and draws on or sustains a strategic relationship between the FFRDC and its sponsor. This and other criteria stipulated by the sponsor are discussed in Section III below.
- d. Individual customers are responsible for compliance with the appropriate policies and/or regulations regarding use of an FFRDC. SMC is responsible for ensuring the requested work fits within the approval criteria presented in Section III below.

I. PROCEDURES

- a. The Aerospace Corporation will request approval for non-DoD FFRDC work via a transmittal letter (an example of which is provided in Attachment 1), with supporting documentation as described in Attachment 2. This transmittal letter and supporting information regarding the specific non-DoD FFRDC work request will be provided to SMC/AXC.
- b. SMC/AXC will evaluate the non-DoD FFRDC work request for approval based on the criteria described in Section III, and will sign and forward this decision to Aerospace within fifteen total working days from the date of receipt by SMC/AXC. If no decision is forwarded to Aerospace within fifteen total working days from the date of receipt by SMC/AXC, then-Aerospace has the approval of SMC/AXC to place the non-DoD FFRDC work in question on a direct contract for performance by the Aerospace FFRDC. However, if within the fifteen day period additional information or clarification is requested of Aerospace by SMC/AXC, the time required for Aerospace to respond will not be counted against the 15-day total SMC review and approval period.

II. CRITERIA FOR EVALUATION OF NON-DOD FFRDC WORK REQUEST

- a. The criteria for evaluation of non-DoD FFRDC work requests are identical to those criteria for evaluation of FFRDC work to be performed under the SMC/Aerospace FFRDC contract. These criteria are all consistent with the policy for the performance of work by DoD-sponsored FFRDCs and parent institutions as stated in section D.1.a of the DoD FFRDC Management Plan. Each non-DoD FFRDC work request will be considered by SMC/AX and SMC/AXC based on the information provided by Aerospace, with regard to the following criteria:
 - 1) The work is Core Work as defined in Section C.4 of the DoD FFRDC Management Plan. That is: the work is consistent with the Purpose and Mission of the Aerospace FFRDC as stated in Section II.A of the "Sponsoring Agreement Between the United States Air Force and The Aerospace Corporation for Operation of The Aerospace FFRDC" (a.k.a. The Sponsoring Agreement); draws on or sustains the strategic relationship between the Aerospace FFRDC and its-sponsor; and is also consistent with at least one of the competencies of the Aerospace FFRDC. These competencies are the DDR&E Core Competencies for the Aerospace FFRDC, as described in Section III.b.
 - 2) The work, as stipulated in the DoD FFRDC Management Plan, could not be performed as effectively by existing in-house resources of the requesting government entity or by other not-for-profit, or for-profit contractor resources.
 - 3) The work can be categorized as encompassed by one or more of the Systems Engineering FFRDC Core Functions for the Aerospace FFRDC, as described in Section III.c.
 - 4) The work is justified in terms of requirements for Aerospace FFRDC resources. Justification may be based on one or more of the characteristics and criteria noted in Section III.E of the Sponsoring Agreement). These are described in Section III.d below.

A checklist is provided in Attachment 3 to document the SMC/AXC evaluation of the work in question. If the criteria summarized in items 1 through 4 of the checklist are not met, then the work cannot be considered FFRDC work.

- b. <u>DDR&E Core Competency Definitions for the Aerospace FFRDC</u>: Each Aerospace non-DoD FFRDC work request for consideration by SMC must be able to be characterized by one or more of the DDR&E Core Competencies for the Aerospace FFRDC. These are:
 - 1) Launch Certification: The Aerospace FFRDC provides an independent launch readiness verification of the launch system design, payload integration, launch system analyses, hardware qualification and acceptance testing, software development and final overall launch processing. Aerospace provides a formal launch readiness assessment input to the SMC/CC's launch certification process.
 - <u>2) Systems of Systems Engineering</u>: The Aerospace FFRDC provides the architecture planning and development, internal and external interface analysis, modeling and simulation analysis, and independent testing necessary to support the development of space systems.

- 3) Systems Development and Acquisition: The Aerospace FFRDC provides operational requirements analysis and evaluation, mission threat analysis, risk assessment, and technical performance analysis and assessment to support acquisition planning, program preparation and evaluation, test planning and evaluation, and program milestone and design reviews for all space systems.
- <u>4) Process Implementation</u>: The Aerospace FFRDC provides technical expertise to support acquisition reform initiatives such as military specifications and standards reform, development and evaluation of critical processes, as well as to support proof-of-concept prototyping in support of space systems.
- 5) <u>Technology Application</u>: The Aerospace FFRDC provides state of the art assessments of technology opportunities, alternatives, and risks to support the application of new technology in current or developing space systems.
- c. <u>Systems Engineering FFRDC Core Functions for the Aerospace FFRDC</u>: Each Aerospace non-DoD FFRDC work request for consideration by SMC must be able to be characterized as encompassed by one or more of the Systems Engineering FFRDC Core Functions for the Aerospace FFRDC. These are:
 - 1) <u>Systems Architecture Planning and Development</u>: Includes items such as broad concepts studies, systems opportunities, systems roadmaps and supporting technology roadmaps. Particular emphasis on "systems of systems" approaches, interoperability and joint operations. Create reference designs for purposes of analysis and program planning.
 - 2) <u>Operational Requirements Analysis and Evaluation</u>: Iterative requirements analysis and flowdown with the customer. Matching program technical requirements with mission requirements. Resolution of conflicting requirements. Evaluation of the degree of mission accomplishment in either a simulated or planned operational environment.
 - 3) <u>Integration Management</u>: Independent analysis and evaluation of the systems' internal and external interfaces. As part of the systems of systems approach, it includes interaction among associated systems.
 - 4) <u>Mission and Threat Analysis</u>: Analysis of existing and potential missions as well as existing and potential threats to support the development of products and processes for operational use. Independent analysis and exploitation of intelligence products for systems. Threat assessment packages tailored to program life cycle needs.
 - 5) <u>Technical Performance Analysis and Assessment</u>: The continuing verification of the degree of anticipated and actual achievement of a technical parameter. When a broad and deep knowledge of the entire mission is required, independent analysis/detection of design flaws and technology problems with resolution alternatives (physical/process) tailored to program needs. The identification and analysis of potential problems in order to quantify and assess risks associated with the evaluation of competing concepts/designs.

- 6) <u>Acquisition Planning</u>, <u>Preparation</u>, and <u>Evaluation</u>: This includes support in preparation of solicitation documents (source selection plan, RFP, statement of work/objectives, technical requirements documents, WBS, etc.) and provision of technical advisors to source selection. Specific activities include evaluation of the contractor's proposals and required documentation as required by the Air Force to accomplish the requirements selection criteria for the system, subsystem, or task.
- 7) <u>Program, Milestone, Design, and Readiness Reviews</u>: Includes all formal and informal technical reviews such as SDR, PDR, CDR, etc. These may be conducted incrementally or at major review points. Support includes reviews of deliverables, independent analysis as required and ATP recommendation. Includes reviews conducted to ensure the system is ready to proceed to its next phase of development. Also includes independent reviews used to ensure that the configuration item of a system is either ready for testing, ready for production at the completion of Engineering and Manufacturing Development, or in the case of space systems, launch, mission, or system operations.
- 8) <u>Technology Requirements, Applications, and Research</u>: State-of-the-art assessments. Assessments of technology opportunities. Technology alternatives and risk assessments versus program needs. Selective, specialized, in-depth analysis of state-of-the-art improvements in critical system technologies. Mission oriented investigation and experimentation (MOIE). Evaluations of the application of available technology to development programs.
- 9) <u>Programs Systems Engineering</u>: Includes requirements development, systems engineering planning, and establishing and supporting processes for integration of requirements flowdown, performance, and design alternatives. Analysis and insight into subsystem and system design and integration, requirements flowdown, design performance, and cost trades. Cross systems integration between programs, lessons learned, technology commonality and other items. Includes independent analysis and evaluation of systems interfaces and functions as required to assure system integrity and reliability.
- 10) Monitoring Launch Vehicle and Satellite Processing and Certifying Launch Readiness: Validation of in-line processing of flight hardware. Adequacy of projected range support. Formal certification of adequacy of processing and readiness for flight, including review of all launch safety issues and validation of issue resolution. Additional support to mission and launch readiness reviews.
- d. <u>Sponsoring Agreement Criteria for Use of The Aerospace FFRDC</u>: One or more of the following criteria for use of the Aerospace FFRDC (from Section III.E of the Sponsoring Agreement) must apply to each Aerospace non-DoD FFRDC work request, for consideration by SMC:
 - 1) Freedom from Bias due to Predilection for Design, Hardware and Software, or Approach: It is important to the DoD that objectivity be retained in design, choice of off-the-shelf hardware and software, choice of hardware from competing contractors, selection of hardware as influenced by possible subsequent production opportunities, preparation of specifications, etc. A hardware or software producing company is likely to have a

predilection for a particular design or product, or a particular manufacturing or management approach. Where such a company has to make a choice between competing contractors, bias is difficult to eliminate.

- 2) Need for State-of-the-Art Information from Government Laboratories and Universities: A task may require extensive knowledge of the state-of-the-art as developed in universities, government laboratories, etc. Such knowledge, of course, is available to industry but is not necessarily used since industry tends to specialize in particular fields of interest consistent with its best competitive position. Assignment of the task to industry or to Aerospace could be governed by the extent to which applicable knowledge of the state-of the art is to be found in these sources.
- 3) Extent of Access to DoD Planning Information: A broad need-to-know is requisite to the execution of advanced planning and integration of proposed systems with existing systems. Extensive and complex integration of requirements, and close liaison with systems users, is necessary in the early conceptual studies, initial analyses, and design stages leading to program definition or acquisition. Bringing individual contractors for the different projects into conceptual planning, and extending general access across DoD programs would, except under unusual circumstances, give the contractors an unfair advantage over competitors because of information gained on programs related to the one on which the contractor performed. On the other hand, too broad a restriction on procurement eligibility may make the contractor reluctant to participate in the planning role. However, if the task is not unduly complex and can be well defined to minimize access to such planning information, and if procurement restrictions are acceptable, the task may be given to industry.
- 4) Extent of Access to Intelligence: Multiple projects, involving many individual contractors would require the wide dissemination of such information. To avoid charge of favoritism, access would have to be granted to all contractors having the capability to bid. Providing this intelligence to Aerospace, however, limits its distribution within reasonable bounds and permits technical support consistent with, and fully evaluated in terms of longrange plans and goals, and other sensitive information.
- 5) Need for Industry Proprietary Information: Proprietary data concerning designs, manufacture and processes are very important to industry. Contractors are reluctant to part with proprietary data necessary for interface management to a contractor who is studying or advising on a system for a procurement agency. Where such needs for proprietary data are minimal, or where problems concerning access to such data are not significant, this criterion could be of minor importance. Where the problems are serious, and the interface complex, Aerospace can lessen proprietary problems materially.
- 6) Access to Industry Proposals: Some tasks require review of industry proposals, reduction of data contained in a common base, and selection of the best approaches. It is generally inappropriate to give planning or program definition studies, or contractor proposals, either unsolicited or in response to invitations, to industry for technical evaluation. Industry should not have access to this information nor be involved in establishing technical criteria involved in decision-making.

- 7) Need for Extensive Background Information: Some tasks require drawing heavily on previous experience or background that any one industrial concern could not normally have unless it had participated in a number of programs to the exclusion of other contractors.
- 8) <u>Need for Diversified Skills:</u> The task requirements may require extensive diversified special skills not readily available to any one contractor. It may be necessary to maintain inordinate control over the contractor through the associate mechanism. Where management problems for the associate contractors are minimal, industry could be qualified to meet this criterion.
- 9) Need for Outstanding Specialists in Specific Fields: For certain tasks, one or more state-of-the-art considerations may be of overriding importance, and the whole project may hinge on the availability of technical competence in a specified field. Such competence may exist uniquely at Aerospace by virtue of its primary program mission and the crossfeed of information and experience and knowledge among similar programs. However, industry may also have such outstanding specialists, and where this situation exists, appropriate tasks should be assigned to industry, not to Aerospace simply because they are convenient. In such cases, Aerospace may perform in a subsystem or research and engineering role.
- 10) <u>Continuity of Effort</u>: Continuity of effort on a single system from conceptual and advanced planning through initial system engineering and specification provides a degree of design coherency and consistency that cannot be obtained as effectively in any other way. It may not be desirable to involve industrial contractors under these conditions because of the difficulty in maintaining continuity without giving unfair competitive advantages, or unwarranted access to intelligence data.
- 11) Need for Large Special Facilities: Some tasks require specialized facilities. Obviously such installations cannot be provided to all contractors interested in bidding on a program and making such facility available to any one contractor would give unfair competitive advantage. Duplication would not be in the Government's best interest.

Attachment 1

EXAMPLE NON-DOD FFRDC WORK TRANSMITTAL LETTER

DD MM YY		In reply refer to: XXXX-XXXX	
То:	Department of the Air Force Space and Missile Systems Cer 2420 Vela Way, Suite 1467 El Segundo, CA 90245-4659	nter/AXC	
Subject:	Non-DoD Work: Proposal to XXX	X Entity, entitled "XXXXX"	
Attention:	XXXXX, SMC/AXC		
Supporting Info		e, regarding non-DoD FFRDC work, the attached led. The proposal is to be submitted to XXX	
commencing ap		Contract Type} contract for a XX [period] stimated total cost of \$XXX and an expected TE).	
Corporation wit	hin fifteen (15) working days from	nquiries are forwarded to The Aerospace om the receipt of this letter by email or hardcopy, o place the contemplated effort on contract.	
Signed		Signed	
XXXXXX, Mana Civil and Comme			
Attachments:			
Concur:		Concur:	
Contracting Office	eer:	Program Manager:	
Date:		Date:	

Annex 4 Attachment 2

SUPPORTING INFORMATION ABSTRACT GUIDELINES FOR AEROSPACE NON-DOD FFRDC WORK

CUSTOMER

- Identify and describe the non-DoD customer that has requested Aerospace non-DoD FFRDC support
 - Provide pertinent background including any Aerospace experience with the customer
- Describe the customer's current and/or past relationship between this customer and SMC

OBJECTIVES & DESCRIPTION

- Describe, in laymen's terms where possible, the requested work, including technical nature of the work, level of effort (cost in terms of both cost and STE), and period of performance
- Identify the technical lead or principal investigator

SUITABILITY OF FFRDC INVOLVEMENT

- Discuss how the requested work supports National Security Space, consistent with the Aerospace FFRDC's purpose and mission
- Discuss how neither the customer nor private industry could do the work as effectively
- Describe which one or more of the ten Systems Engineering FFRDC Core Functions encompass the work
- Discuss how the work satisfies one or more of the eleven criteria for use of the Aerospace FFRDC
- Discuss how the requested work augments or maintains capabilities, technologies, methods, or technical expertise of importance to ongoing or future Aerospace FFRDC support to SMC

BENEFITS TO NATIONAL INTEREST

- Discuss how the requested work benefits the national interest; technical, economic, etc. Include national goals or programs directly or indirectly enhanced by the requested work; insight to state-of-the-art technical innovations, etc.
- Describe how the work is consistent with one or more core competencies (give example)
- Discuss how the requested work augments or maintains capabilities, technologies, methods, or technical expertise of importance to ongoing or future Aerospace FFRDC support.

EFFORTS TO PREVENT OR MITIGATE ANY ACTUAL, POTENTIAL OR PERCEIVED CONFLICT OF INTEREST

- Describe how the work is consistent with Aerospace's special relationship with USAF with respect to objectivity, broad access to information, comprehensive knowledge of sponsor needs and problems, and long-term continuity
- Describe specific efforts taken by Aerospace to prevent or mitigate any actual, potential or perceived conflict of interest that would undermine, or appear to undermine, the independence, objectivity, or credibility of the Aerospace FFRDC
- Verify the work as non-competitive with a brief explanation of how or why
 - State whether the requested work will be competed in any manner
- Discuss whether the requested work will involve international entities, foreign governments, or international companies
- Discuss how security, export control and disclosure compliance will be ensured for international contractors

OTHER

- Discuss whether results/deliverables will be available for public release
- Discuss if issues of proprietary data/information will be involved in the requested work, and how they will be handled

Attachment 3

EVALUATION CRITERIA CHECKLIST FOR NON-DOD FFRDC WORK

The purpose of this checklist is to document the evaluation of the work in question. If the criteria summarized in items I through IV of the checklist are not met, then the work is not FFRDC work. The sponsor will evaluate the criteria for non-FFRDC work in the following manner:

I. The work is Core Work. That is, it meets <u>all</u> of the following three criteria:
 a. Consistent with Purpose and Mission of the Aerospace FFRDC as stated in Section
II.A of The Sponsoring Agreement b. Draws on or syntains the strategic relationship between the Agreement EERDC and
 b. Draws on or sustains the strategic relationship between the Aerospace FFRDC and its spensor
 its sponsor c. Consistent with <u>one or more</u> of the competencies of the Aerospace FFRDC as defined by DDR&E. These are: Launch Certification Systems of Systems Engineering
 3) Systems Development and Acquisition
 4) Process Implementation
 5) Technology Application
 o) remicross representation
 II. The work cannot be performed as effectively by existing in-house resources of the requesting government entity or by other not-for-profit, or for-profit contractor resources.
 III. The work can be categorized as encompassed by one or more of the Systems Engineering FFRDC Core Functions for the Aerospace FFRDC. They are: a. Systems Architecture Planning and Development b. Operational Requirements Analysis and Evaluation c. Integration Management d. Mission and Threat Analysis e. Technical Performance Analysis and Assessment f. Acquisition Planning, Preparation, and Evaluation g. Program, Milestone, Design, and Readiness Reviews h. Technology Requirements, Applications, and Research i. Programs Systems Engineering j. Monitoring Launch Vehicle and Satellite Processing and Certifying Launch
Readiness IV. The work satisfies one or more of the Sponsoring Agreement's Criteria for use of the
Aerospace FFRDC. They are:
 a. Freedom from Bias due to Predilection for Design, Hardware and Software, or
Approach.
 b. Need for State-of-the-Art Information from Government Laboratories and Universities.

 c.	Extent of Access to DoD Planning Information.
d.	Extent of Access to Intelligence.
 e.	Need for Industry Proprietary Information.
 f.	Access to Industry Proposals.
 g.	Need for Extensive Background Information.
h.	Need for Diversified Skills.
i.	Need for Outstanding Specialists in Specific Fields.
 j.	Continuity of Effort.
k.	Need for Large Special Facilities.

ANNEX 5

20 January 2004

PROCEDURES TO GOVERN THE MUTUAL USE OF FACILITY SPACE BETWEEN THE GOVERNMENT AND AEROSPACE FFRDC PERSONNEL

PROCEDURES TO GOVERN THE MUTUAL USE OF FACILITY SPACE BETWEEN THE GOVERNMENT AND AEROSPACE FFRDC PERSONNEL

Purpose: The purpose of this Annex is to outline policy and procedures on the mutual use of facility space between the Air Force Space and Missile Systems Center (SMC) and other Aerospace FFRDC users and The Aerospace Corporation.

Aerospace, in performing its FFRDC role, must support numerous customers who are involved in supporting the Nation's Space Mission. The majority of the FFRDC's support goes to SMC, NRO and AF Space Command. However, there are many other AF offices involved in the Space Mission and many DoD organizations such as NSA, MDA, and the Army and Navy. Many civil organizations also play a vital role in space, primarily NASA and NOAA. This annex documents the processes in managing the use of assigned space by Aerospace personnel located in any of the FFRDC users facilities in any location, and use of assigned space by the FFRDC users located in Aerospace facilities anywhere in the country.

The current Aerospace FFRDC contract provides an attachment that describes requirements for the collocation of Aerospace FFRDC personnel in users facilities. These requirements are used by FFRDC users to establish conditions in which Aerospace FFRDC personnel are collocated in the FFRDC users facilities. If further requirements other than those spelled out in the above mentioned attachment to the contract are needed or if the requirements in the attachment cannot be met by the FFRDC users, the matter can be discussed with the Aerospace FFRDC through SMC/AXC. When FFRDC user personnel other than SMC personnel are collocated in an Aerospace facility, as a minimum the personnel must be provided the same services and facilities as SMC personnel.

I. GENERAL UNDERSTANDINGS

- a. The mission of SMC and several other Air Force and Government organizations, Air Force Space Command and NRO in particular, is to plan and manage the acquisition of space systems, their ancillary equipments, launch sites, and facilities for on-orbit testing, command and control. This mission imposes special demands and constraints on the prosecution of the effort and on the role and function of the Aerospace FFRDC, as learned from the experience of several decades
- b. Vital to the success of the mission is close daily interaction between the Government System Program Offices (SPO) and Aerospace Program Offices (APO). The Air Force and Aerospace have consequently formulated policies regarding the utilization of facilities to satisfy this need within the principle of sound facilities acquisition and management.
- (1) Since the inception of the systems engineer/associate contractor method of systems acquisition, collocation (proximity) of SPOs and APOs has been a basic management principle of crucial importance to program success. The technical complexities and security

classifications of these programs demand frequent, rapid, real-time, secure communications. Collocation improves the efficiency and effectiveness of the SPO and APO interface. Collocation expedites the technical interchange between the SPO and APO, improves the accuracy of understandings on complex technical interface issues, is cost effective on the efficient use of labor and equipment resources, and avoids proliferation and circulation of highly classified documents outside the collocated area.

- (2) The principal objective of Aerospace facilities acquisition is to provide by purchase and/or lease, within the limits of corporate financial capability, office space and laboratories adequate to house Aerospace personnel, consistent with prudent business planning. Aerospace personnel thus should collocate in Government furnished facilities only to the extent necessary to fulfill corporate responsibilities in support of its customers. Similarly, all collocations in Aerospace facilities by SMC and other Aerospace FFRDC user personnel shall be limited to situations where such collocation is necessary for performance of the Aerospace FFRDC contract or in support of the Nation's Space Mission.
- (3) To achieve the advantages of collocation within appropriate facility management principles, a procedure for space exchange is necessary, i.e., the Government makes space available in its facilities for the collocation of Aerospace personnel, and Aerospace makes space available in its facilities for the collocation of Government personnel, to facilitate program support, enhance the maintenance of security and afford efficient utilization of the special facilities of each.
- c. The needs of national security programs supported by Aerospace establish the priorities for determining which Aerospace elements are to be collocated in Government facilities and which Government elements are to be collocated in Aerospace facilities.
- d. In the interest of improving productivity, it is the common objective of the Government and Aerospace to limit building occupancy to design capacity. It is the objective of the Government and Aerospace to provide equivalent square feet per occupant for Aerospace personnel at each site, recognizing that ratios may vary slightly due to differing building designs.
- e. In general, the total number of Government personnel collocated in Aerospace facilities shall not exceed the total number of Aerospace personnel collocated in Government facilities. However, short term imbalances of Government personnel in Aerospace facilities are acceptable if such imbalances are necessary to meet Aerospace and Government contractual and mission objectives.
- II. PROCEDURE. When a proposed relocation or any changes to an approved plan involving collocation appears to be in the mutual best interest of mission performance authorized under the contract and Aerospace contractual performance, the following will apply:
- a. The 61st Air Base Group Commander (61 ABG/CC), the Staff Office of Primary Responsibility for Space Allocation and the Aerospace Principal Director of Administrative Operations will jointly:
- (1) Describe the requirement for collocation.

- (2) Identify the number of affected Government space users and Aerospace space users.
- (3) Analyze the before and after effects of the proposed collocation on building utilization.
- (4) Evaluate any concomitant requirements of the proposed collocation for parking and/or support services.
- b. The Office of Primary Responsibility for assuring proper coordination and obtaining approval by the Commander, SMC, is the Acquisition Contract Support Office, SMC/AXC. The corresponding Aerospace office is the Contracts Directorate.
- c. The proposed collocations will be implemented upon the approval of the SMC Commander or designee and the President or designee of Aerospace.
- d. Any contractor, non-government and non-FFRDC personnel, supporting Air Force/Government programs will be assigned office space in Aerospace facilities only with prior written justification from the System Program Offices (SPO) or Government Program Office, and approval of the Contracting Officer (SMC/PKR) and the President or Executive Vice President of Aerospace, or their designee.
- (1). Contractor, non-government and non-FFRDC personnel assigned space at any Aerospace facility may be required by the SPO or Government Program Office to enter into a Facility Rent-Lease Agreement with The Aerospace Corporation for required office space. The SPO or Government Program Office sponsoring a new contractor, non-government or non-FFRDC personnel shall send a request to the SMC/PKR Contracting Officer for approval. The sponsor's request shall include the justification, estimated number of contractor, non-government or non-FFRDC personnel, and the Point of Contact for each of the contractor, non-government or non-FFRDC personnel who is authorized to enter into and sign a Facility Rent-Lease Agreement with The Aerospace Corporation. Upon approval, the SMC/PKR Contracting Officer shall notify the Aerospace Defense Programs, Contract and Procurement Directorate when approved.
- (2). The Aerospace Defense Programs, Contract and Procurement Directorate, will contact the Aerospace Facilities Division to arrange and establish the Facility Rent-Lease Agreements with the Point of Contact(s) identified for each contractor, non-government or non-FFRDC personnel.
- (3.) Contractor, non-government or non-FFRDC personnel residing in Aerospace facilities under a Facility Rent-Lease Agreement will not be counted as Air Force/Government personnel in the facility space allocation balance. All others not having a Facility Rent-Lease Agreement will be included in the Air Force/Government headcount addressed in I.e above.
- e. Requests for additional collocation space following the approval of a prior request will be evaluated using the above-cited guidelines a d.

III. MINOR CONSTRUCTION ON GOVERNMENT AND AEROSPACE FACILITIES

- a. All minor construction projects of Government facilities, i.e., renovations, alterations, upgrading, and restoration to accommodate collocation of Government or Aerospace personnel, shall be subject to review and written approval by the cognizant agency, i.e. 61 ABG/CEZMP.
- b. All such minor construction project approvals shall be based on mutually agreeable facility standards applicable to both Government and Aerospace personnel located in Government facilities.
- c. The cost of minor construction to Government facilities by Aerospace as the result of Aerospace collocation in Government premises shall be borne by Aerospace and are subject to approval by the ACO as to allocability of costs for reimbursement under the contract.
- d. The cost of minor construction to Aerospace facilities by the Government as a result of Government collocation in Aerospace premises shall be borne by the Government.
- IV. AMENDMENT AND TERMINATION. This Annex may be amended or superseded by the Commander or designee, SMC, and the President or designee, Aerospace. This understanding may be terminated by either the Commander, SMC, or the President, Aerospace, upon 30-day written notice to the other party.

Attachment 1

PROCEDURES FOR ESTABLISHING COLLOCATION OF GOVERNMENT AND THE AEROSPACE CORPORATION PERSONNEL

- I. The collocation of personnel encompasses two methods of locating personnel. First, the collocating of Government personnel in Aerospace facilities and second, the collocating of The Aerospace Corporation (Aerospace) personnel in Government facilities. This procedure encompasses both methods.
- a. The SMC System Program Office (SPO) or equivalent Government Program Director is the office of primary responsibility for initiating all requests for collocation.
- b. The SPO Director's request shall provide support for completion of each of the steps described in the User Guide Annex 5, paragraph IIa, and be in compliance with paragraph IId.
- c. The SPO Director's request will then be forwarded to SMC/AXC for staffing of the request as stipulated by Annex 5, paragraph IIb.
- d. Collocation can be effected after approval by notification from SMC/AXC that the SMC Commander or designee and the President or designee of Aerospace have approved the collocation as stipulated by Annex 5, paragraph IIc.
- II. Facility Standards:
- a. Standards for Aerospace Facility Use by the Government:
- 1. The work environment standard for office space allocation to Government personnel collocated at any Aerospace location will be based on generally accepted commercial practices (e.g., Aerospace's standards) consistent with that which is required for the most cost efficient and professionally effective task accomplishment by management, scientific and engineering personnel.
- 2. The cognizant parties recognize that within each organization, different levels of management and professional personnel exist based on assigned responsibilities, complexity of work and salaries. Therefore in all cases effort shall be made to provide physical office space and office standards based on these levels and in accordance with established organizational practices. Additionally, in all cases paramount consideration will be given to cost efficiency, professional effectiveness and the assignment of space that provides maximum use within the physical limitations of existing facilities and results in the minimum alteration/modification to existing facilities.

- 3. The facility shall be sufficiently air conditioned and/or heated as necessary in accordance with Aerospace procedures and consistent with that service which is furnished to Aerospace personnel in the same or similar facilities. The quality and frequency of janitorial and maintenance service will be based on Aerospace standards conducive to an environment associated with the standard for management, scientific and engineering personnel.
- 4. Aerospace shall provide office space in accordance with established standards for the comparable Aerospace levels of personnel based on the organizational level of the Government personnel and their assigned responsibilities, complexity of work or salary. The Government shall provide its own office furniture, e.g. book cases, chairs, pictures, desk sets, etc., when occupying Aerospace facility space. Carpets and drapes are considered to be floor and window coverings, without regard to occupant, and are not to be treated as furnishings.
- b. Standards for Government Facility Use by Aerospace:
- 1. The work environment standards for office space allocated to Aerospace personnel collocated within any Government facilities shall be based on generally accepted local industry practices consistent with that which is required for the most cost efficient and professionally effective task accomplishment by management, scientific and engineering personnel.
- 2. The cognizant parties recognize that within each organization different levels of management and professional personnel exist based on assigned responsibilities, complexity of work and salaries. Therefore in all cases effort will be made to provide physical office space and office standards based on these levels and in accordance with established organizational practices. Additionally, in all cases paramount consideration will be given to cost efficiency, professional effectiveness and the assignment of space, which provides maximum use of the physical limitations of existing facilities and results in the minimum alteration/modification to existing facilities.
- 3. The office shall be sufficiently air conditioned and/or heated as necessary in accordance with Government procedures and consistent with that service which is furnished to Government personnel in the same or similar facilities. The quality and frequency of janitorial and maintenance service will be based on standards conducive to an environment associated with the standard for management, scientific and engineering personnel.
- 4. Aerospace shall provide its own office furniture, e.g. book cases, chairs, pictures, desk sets, etc., when occupying Government facility space. Aerospace shall provide the most cost efficient furnishing of the offices in accordance with established standards for Aerospace levels of personnel. However, best efforts shall be made to establish close parity to Government personnel office standards for the specific purpose of avoiding the appearance or perception of significantly different levels of office standards. Carpets and drapes are considered to be floor and wall coverings, without regard to occupant, and are not to be considered as furnishings.
- III. Support Services to Collocated Personnel:
- a. Parking:

- 1. The Government will provide parking space to Aerospace personnel collocated on Government facilities
- 2. Aerospace will provide parking spaces to the Government personnel collocated on Aerospace facilities.
- b. Mail Delivery:
- 1. Mail delivery for Aerospace personnel collocated on Government facilities will be the responsibility of Aerospace.
- 2. Mail delivery for Government personnel collocated on Aerospace facilities will be delivered by the appropriate government organizations to stations at Aerospace as provided by the SPO Director.
- c. Safety. All collocated personnel, both Air Force and Aerospace, will adhere to the existing safety regulations applicable to their location.
- d. Security. All collocated personnel will adhere to the existing security regulations applicable to their location.
- e. Office Equipment and Supplies. Each organization is responsible for providing office equipment and supplies to its own personnel. This includes reproduction and facsimile machines as well as stationery supplies.
- f. Telecommunication Services. Telephone service for collocated personnel will, as a general rule, be provided by their respective communication center. The reason for this arrangement is that Aerospace and the Government have separate telephone systems. Should either of the organizations collocated on the other's premises elect to be serviced by the telephone system of the site organization, such arrangements can be made on a case-by-case basis. Whenever a collocated organization requests to be serviced by the site organization, the installation and cost of the telephones, equipment and installation services will be accomplished and paid for by the site organization. In the case of Aerospace, installation costs will be an allowable cost because of the need for operational interface of personnel collocated to perform program functions. Whenever the collocated guest vacates the site organization's premises, the installed telephone lines will be the responsibility of the site organization to either retain or terminate. The user will pay the charges for use of the telephone system from appropriate funds. Audiovisual/teleconferencing services will be supported on a case-by-case basis as mutually agreed upon.
- g. Data Networks, Computer Equipment and Software.
- 1. Data Networks. The Aerospace and Government network infrastructures shall be completely independent. Aerospace personnel collocated at a Government facility shall be allowed to maintain a separate IT infrastructure on the Government network, with sufficient space and

environmental controls provided for server and related equipment. For El Segundo facilities, the host organization shall allow, and cooperate in providing, direct connectivity for collocated personnel to their home organization's network.

- 2. Desktop computer equipment and related hardware, software, and support for collocated personnel shall be provided by their own organization and not by the host organization. Exceptions shall be approved by the cognizant Aerospace Corporate Information Resources Division (CIRD) Director or higher, and by the cognizant Government Communication Squadron person. Specialized software or hardware required to interface with the host organization might best (or only) be obtained and supported by the host organization.
- 3. In all cases of commercial software sharing for networking purposes, due regard for software licenses shall be given.
- 4. Access by non-Aerospace personnel to Aerospace computers or an Aerospace network shall be initiated and processed by individual requests through SMC/AXC and the Aerospace Contracts Directorate.
- 5. Network and computer usage at specific facilities may be governed by a separate Memorandum of Understanding (MOU). This Section (g) shall take precedence over any such agreements.
- h. Reporting of Collocation Space. SMC/AXC is the Government office responsible for maintaining records of all collocated space. The Aerospace Contracts Directorate will submit quarterly reports to SMC/AXC indicating collocated space occupied by the Government and Aerospace by location (including building number at El Segundo), square feet occupied, and number of occupants. SMC/AXC and the Aerospace Contracts Directorate will assure that there is not a material imbalance of Aerospace collocation at Government locations and not more than a minor imbalance of Government collocation at Aerospace locations. Any such imbalance not resolved by the respective contracts organizations will be referred to the SMC Commander or designee and Aerospace President or designee for resolution.

ANNEX 6

20 January 2004

Enabling Clauses for General Systems Engineering and Integration (GSE&I), Technical Review (TR) and Technical Support (TS)

Annex 6

ENABLING CLAUSES FOR GENERAL SYSTEMS ENGINEERING AND INTEGRATION (GSE&I), TECHNICAL REVIEW (TR) AND TECHNICAL SUPPORT (TS)

I. ENABLING CLAUSE FOR GENERAL SYSTEMS ENGINEERING AND INTEGRATION

- a. This contract covers part of the * program which is under the general program management of the **. The Air Force has entered into a contract with The Aerospace Corporation for the services of a technical group, which will support the DoD program office by performing General Systems Engineering and Integration.
- b. General Systems Engineering and Integration (GSE&I) deals with overall system definition; integration both within the system and with associated systems; analysis of system segment and subsystem design; design compromises and tradeoffs; definition of interfaces; review of hardware and software, including manufacturing and quality control; observation, review and evaluation of tests and test data; support of launch, flight test, and orbital operations; appraisal of the contractors' technical performance through meetings with contractors and subcontractors, exchange and analysis of information on progress and problems; review of plans for future work; developing solutions to problems; technical alternatives for reduced program risk; providing comments and recommendations in writing to the DoD System Program Manager and/or Project Officer as an independent technical assessment for consideration for modifying the program or redirecting the contractor's efforts; all to the extent necessary to assure timely and economical accomplishment of program objectives consistent with mission requirements.
- c. In the performance of this contract, the contractor agrees to cooperate with The Aerospace Corporation by responding to invitations from authorized personnel to attend meetings; by providing access to technical information and research, development planning data such as, but not limited to, design and development analyses; test data and results; equipment and process specifications; test and test equipment specifications and procedures, parts and quality control procedures, records and data; manufacturing and assembly procedures; and schedule and milestone data; all in their original form or reproduced form and including cost⁺ data; by delivering data as specified in the Contract Data Requirements List; by discussing technical matters relating to this program; by providing access to contractor facilities utilized in the performance of this contract; and by allowing observation of technical activities by appropriate Aerospace technical personnel. The Aerospace personnel engaged in general systems engineering and integration effort are authorized access to any technical information pertaining to this contract.
- d. The contractor further agrees to include in each subcontract a clause requiring compliance by subcontractor and succeeding levels of subcontractors with the response and access provisions of paragraph (c) above, subject to coordination with the contractor. This agreement does not relieve the contractor of its responsibility to manage the subcontracts effectively and efficiently nor is it intended to establish privity of contract between the Government or The Aerospace Corporation and such subcontractors.

- e. The Aerospace Corporation personnel are not authorized to direct the contractor in any manner. The contractor agrees to accept technical direction as follows:
- 1. Technical direction under this contract will be given to the contractor solely by ***.
- 2. Whenever it becomes necessary to modify the contract and redirect the effort, a Change Order signed by the Contracting Officer or a Supplemental Agreement signed by both the Contracting Officer and the Contractor will be issued.

(End of Clause)

II. ENABLING CLAUSE FOR TECHNICAL REVIEW

- a. The Air Force Space and Missile Systems Center (SMC) is responsible for management of this contract. The Air Force has entered into a contract with The Aerospace Corporation for the services of a technical group that will support the DoD program office by performing Technical Review tasks
- b. Technical Review (TR) includes the process of appraising the technical performance of the contractor through meetings, exchanging information on progress and problems, reviewing reports, evaluating presentations, reviewing hardware and software, witnessing and evaluating tests, analyzing plans for future work, evaluating efforts relative to contract technical objectives, and providing comments and recommendations in writing to the Air Force Program Manager as an independent technical assessment for consideration for modifying the program or redirecting the contractors' efforts to assure timely and economical accomplishment of program objectives.
- c. In the performance of this contract, the contractor agrees to cooperate with The Aerospace Corporation by responding to invitations from authorized personnel to attend meetings; by providing access to technical information and research, development and planning data such as, but not limited to, design and development analyses; test data and results; equipment and process specifications; and test equipment specifications and procedures, parts and quality control procedures, records and data; manufacturing and assembly procedures; and schedule and milestone data, all in their original form or reproduced form and including cost⁺ data; by delivering data as specified in the Contract Data Requirements List; by discussing technical matters relating to this program; by providing access to contractor facilities utilized in the performance of this contract; and by allowing observation of technical activities by appropriate Aerospace technical personnel. The Aerospace personnel engaged in review efforts are authorized access to any technical information pertaining to the contract.
- d. The contractor further agrees to include in each subcontract a clause requiring compliance by the subcontractor and succeeding levels of subcontractors with the response and access provisions

⁺ Cost data is defined as information associated with the programmatic elements of life cycle (concept, development, production, operations, and retirement) of the system/program. As defined, cost data differs from "financial" data, which is defined as information associated with the internal workings of a company or contractor that is not specific to a project or program.

of paragraph (c) above, subject to coordination with the contractor. This agreement does not relieve the contractor of responsibility to manage the subcontracts effectively and efficiently nor is it intended to establish privity of contract between the Government or The Aerospace Corporation and such subcontractors.

- e. The Aerospace Corporation personnel are not authorized to direct the contractor in any manner. The contractor agrees to accept technical direction as follows:
 - 1. Technical direction under this contract will be given to the contractor solely by ***.
- 2. Whenever it becomes necessary to modify the contract and redirect the effort, a change order signed by the Contracting Officer or a Supplemental Agreement signed by both the Contracting Officer and the Contractor will be issued.
- ⁺ Cost data is defined as information associated with the programmatic elements of life cycle (concept, development, production, operations, and retirement) of the system/program. As defined, cost data differs from "financial" data, which is defined as information associated with the internal workings of a company or contractor that is not specific to a project or program.

(End of Clause)

III. ENABLING CLAUSE FOR TECHNICAL SUPPORT

- a. The Air Force Space and Missiles System Center (SMC) is responsible for management of this contract. The Air Force has entered into a contract with The Aerospace Corporation for the services of a technical group that will support the DoD program office by performing Technical Support tasks.
- b. Technical Support (TS) deals with broad areas of specialized needs of customers for planning, system architecting, research and development, horizontal engineering, or analytical activities for which the Aerospace FFRDC is uniquely qualified by virtue of its specially qualified personnel, facilities, or corporate memory. The categories of TS tasks are: Selected Research, Development, Test and Evaluation; Plans and System Architecture; Multi-Program Systems Enhancement; International Technology Assessment; and Acquisition Support.
- c. In the performance of this contract, the contractor agrees to cooperate with The Aerospace Corporation by responding to invitations from authorized personnel to attend meetings; by providing access to technical information and research, development and planning data such as, but not limited to, design and development analyses; test data and results; equipment and process specifications; and test equipment specifications and procedures, parts and quality control procedures, records and data; manufacturing and assembly procedures; and schedule and milestone data, all in their original form or reproduced form and including cost⁺ data; by delivering data as specified in the Contract Data Requirements List; by discussing technical matters relating to this program; by providing access to contractor facilities utilized in the performance of this contract; and by allowing observation of technical activities by appropriate Aerospace technical personnel. The Aerospace personnel engaged in the review effort are authorized access to any technical information pertaining to the contract.

- d. The contractor further agrees to include in each subcontract a clause requiring compliance by the subcontractor and succeeding levels of subcontractors with the response and access provisions of paragraph (c) above, subject to coordination with the contractor. This agreement does not relieve the contractor of responsibility to manage the subcontracts effectively and efficiently nor is it intended to establish privity of contract between the Government or The Aerospace Corporation and such subcontractors.
- e. The Aerospace Corporation personnel are not authorized to direct the contractor in any manner. The contractor agrees to accept technical direction as follows:
 - 1. Technical direction under this contract will be given to the contractor solely by ***.
- 2. Whenever it becomes necessary to modify the contract and redirect the effort, a Change Order signed by the Contracting Officer, or a Supplemental Agreement signed by both the Contracting Officer and the Contractor will be issued.

(End of Clause)

⁺ Cost data is defined as information associated with the programmatic elements of life cycle (concept, development, production, operations, and retirement) of the system/program. As defined, cost data differs from "financial" data, which is defined as information associated with the internal workings of a company or contractor that is not specific to a project or program.

^{*} Insert name of program.

^{**} In all contracts except those for USECAF/DNRO insert "Air Force Space and Missile Systems Center (SMC)." In USECAF/DNRO contracts insert "Under Secretary of the Air Force/Director, National Reconnaissance Office (USECAF/DNRO)."

^{***} Insert "SMC" or "USECAF/DNRO" as appropriate.

ANNEX 7

20 January 2004

Process Instructions for Performance Evaluation

Annex 7

PROCESS INSTRUCTIONS FOR PERFORMANCE EVALUATION

Purpose: The purpose of this Annex is to outline the procedures for conducting the performance evaluation of The Aerospace Corporation's FFRDC activities.

- I. SEMI-ANNUAL, CONTRACT PERFORMANCE EVALUATION PROCEDURES.
- A. Evaluation period will be from 1 October XXXX to 30 September XXXX. The interim performance evaluation will be from 1 October XXXX to 31 March XXXX.
- B. <u>Attachment 1</u> is an example of the SMC/AXC Aerospace Performance Evaluation Tasking Letter. <u>Attachment 2</u> is an example of the Customer Satisfaction Summary Performance Evaluation Report.
 - C. Performance will be evaluated as follows
- 1. Customer Satisfaction. Each major user (SMC two letter program director or agency equivalent) will assess the performance of the FFRDC at the program level. Evaluations will be performed by each Functional Area Evaluator (FAE) coordinated through their Functional Area Chief (FAC) for each Technical Objective and Plan (TO&P) and are to be based on four customer satisfaction criteria. Those criteria are: a) Management Effectiveness and Cost Control; b) Problem Solving; c) Responsiveness; and d) Working Relations. See detailed descriptions of these evaluation criteria below. Evaluations must consider the adequacy of the Aerospace FFRDC support and quality of work performance without singling out named individuals for outstanding or poor performance. The major user for surveillance purposes will retain the FAE/FAC evaluations and copies will be provided to SMC/AXC. The major users or SPO/Agencies should brief the appropriate Aerospace personnel in an effort to expeditiously resolve any problems identified and improve performance.

Each major user or SPO/Agency will assess Customer Satisfaction and submit a Summary Evaluation Report covering all the JONS assigned to your organization (see format in Attachment 1). This will include an Overall Performance Rating (%) for your Aerospace STE support along with an overall numerical rating (%) for each of the four evaluation categories and clear, concise statements of strengths/weaknesses for each of the four evaluation categories listed that support your overall numerical rating (%). Use asterisks to show the level of importance of the strengths/weaknesses as follows:

*Minor **Moderate ***Major

Any weakness identified in the evaluation should be discussed with the appropriate Aerospace counterpart and an effort should be made, in sufficient time, to allow for the resolution of the problem.

2. Corporate Management. SMC/AXC will submit an evaluation of Corporate Management in accordance with <u>Attachment 3</u>.

3. Corporate Cost. The Contracting Officer for The Aerospace Corporation/Air Force FFRDC contract (SMC/AXC) will submit an evaluation of Corporate Cost in accordance with <u>Attachment 4</u>.

II. FFRDC CUSTOMER SATISFACTION SUMMARY EVALUATION PERFORMANCE RATING DEFINITIONS

A. Customer Satisfaction

1. Management Effectiveness and Cost Control: Includes the evaluation of Aerospace management in providing a cost effective and efficient organization; the necessary skills mix of technical expertise; the leadership and guidance given to their staff.

a. Above Standard Excellent Very Good	91-100% 81-90%	Management approach and leadership consistently provides a responsive organization, minimize personnel turnover problems (within Aerospace's purview), and maintain all necessary technical skills to support specific TO&P tasking.
b. Meets Standard		Management approach and leadership usually provide
Good	66-80%	a responsive organization, accommodate personnel
Satisfactory	51-65%	turnover (within Aerospace's purview), and maintain adequate technical skills to satisfy specific TO&P tasking.
c. Below Standard Unsatisfactory	1-50%	Management approach and leadership fail to provide a responsive organization, or accommodate personnel turnover (within Aerospace's purview), or fails to maintain adequate technical skills to satisfy specific TO&P tasking.

2. Meeting Technical Needs and Problem Solving: Evaluation of Aerospace's technical competence and objectivity, technical, scientific and engineering abilities of Aerospace STE, adequacy of technical accomplishments and inputs, contributions to the programs success, ability to anticipate, identify and develop solutions to problems within established program costs and schedule limits.

a. Above Standard Excellent Very Good	91-100% 81-90%	Aerospace consistently demonstrates credible and highly objective technical abilities relative to planning factors, technical recommendations and problem solutions. Aerospace technical accomplishments and inputs consistently make major contributions to program success. Problem solving ability is demonstrated by an innovative system approach that considers all aspects of a problem. Proposed solutions consistently minimize program costs and schedule
		impacts.

b. Meets Standard Good Satisfactory	66-80% 51-65%	Aerospace normally demonstrates credible and objective technical abilities relative to planning factors, technical recommendations and problem solutions. Aerospace technical accomplishments and inputs normally contributed positively to program
		success. Problem solving usually considers all aspects of a problem. Proposed solutions normally minimize program cost and schedule impacts.
c. Below Standard Unsatisfactory	1-50%	Aerospace fails to demonstrate credible or objective technical abilities relative to planning factors, technical recommendations or problem solutions. Aerospace technical accomplishments and inputs failed to contribute to program success. Problem solving fails to consider one or more critical aspects of problems. Proposed solutions fail to minimize program cost and schedule impacts.

3. Responsiveness: Evaluation of Aerospace's response to program requirements with emphasis on timeliness and quality.

a.	Above Standard		Aerospace consistently anticipates and responds to
	Excellent	91-100%	program needs and recognizes potential problems.
	Very Good	81-90%	Program requirements are systematically addressed
			and all suspenses are met.
b.	Meets Standard		Aerospace anticipates requirements that are then
	Good	66-80%	systematically addressed. Suspenses are normally met.
	Satisfactory	51-65%	
	D 1 (2) 1 1		
c.	Below Standard		Program requirements are not anticipated and
	Unsatisfactory	1-50%	systematically addressed, suspenses are late and
			responses are incomplete.

4. Working Relations: Evaluate the ability of Aerospace employees to work with their Air Force and Industry counterparts to develop a rapport resulting in mutually agreeable methods of attaining mission objectives.

a.	Above Standard		Aerospace	workin	ig re	lations	are c	onsistently
	Excellent	91-100%	professional	and b	busines	sslike.	Working	relations
	Very Good	81-90%	contribute	positiv	vely	to	program	success.
			Communicat	ions are	excell	ent.		
b.	Meets Standard		Aerospace v	vorking	relatio	ons no	rmally co	ntribute to
	Good	66-80%	the program	success.	. Comn	nunica	tions are g	good.
	Satisfactory	51-65%					_	

c. Below Standard Unsatisfactory 1-50% Aerospace working relationships are often characterized by lack of communications and often do not contribute to program success.

B. Corporate Management

This Category considers, but is not limited to, the following factors:

- 1. Effectiveness of Management Approach: Contractor ability to provide an efficient organization with the necessary mix of technical expertise, leadership and guidance.
- **2. Problem solving:** Contractor ability to anticipate, identify and develop solutions to problems.
- **3. Responsiveness:** Contractor ability to respond to program requirements with special emphasis on timeliness and quality.
- **4. Initiative and Cooperation:** Contractor ability to interrelate with Government and Industry to develop rapport that results in mutually agreeable methods of attaining mission objectives.

a. ABOVE STANDARD

A. EXCELLENT (91-100)

- 1. Substantially meets the requirements of the Very Good rating, plus:
- 2. Management demonstrates the highest degree of foresight in planning, depth of analysis, accomplishment of tasks, advance identification of problems and problem resolution. Proposed solutions consistently minimize cost and schedule impacts.
- 3. Consistently anticipates and responds to government needs. Identifies high-risk/problem areas early, plans alternative/parallel courses of action, and keeps the government well informed of developments.
- 4. Develops an effective, efficient contractor team, which reflects strong, open lines of communication. Improvements to the planned program result from high quality communication with all government offices and other external focal points (e.g., DCAA, DCMDW, etc.) with no program impacts attributed to poor communication.
- 5. Contractor's team consists of highly qualified and motivated personnel with an emphasis on productivity and responsiveness. The individual effectiveness level of STE assigned to a program is consistently appropriate. Minimizes changes of key individuals at the program office level.

B. VERY GOOD (81-90)

- 1. Substantially meets the requirements of the Good rating, plus:
- 2. Plays a key role in identifying issues and recommendations for overall contract improvements.
- 3. Demonstrates initiative and foresight in planning for potential problems, analyzing impacts, resolving problems and instituting prompt corrective actions. Contractor's positive management control over problem areas results in early problem resolution and minimal impacts.
- 4. Continuously reviews non-SPO dedicated labor resource allocations in order to minimize labor usage, while maintaining adequate staffing levels to maintain schedule and adequate quality of work and maximum productivity.

b. MEETS STANDARD

A. GOOD (66-80)

- 1. Substantially meets the requirements of the Satisfactory rating, plus:
- 2. Responsive to government technical and business management requests
- 3. Management identifies problems, causes and solutions, which have a potential for impact on cost, schedule or performance.
- 4. Management initiates and promotes strong two-way communication with government counterparts. Seeks continual interaction with government representatives on contract status, goals and objectives and coordinates with the appropriate government personnel to ensure contractor interpretation of contract tasking is correct.

B. SATISFACTORY (51-65)

- 1. Management approach and leadership usually provide a responsive organization, accommodate personnel turnover and maintain adequate technical skills to satisfy specific TO&P tasking.
- 2. Establishes clear lines of authority and provides effective communication with all SMC offices, as well as other agencies. Minimal programmatic or technical impacts experienced because of communication problems.
- 3. Overall corporate planning is comprehensive and contains a logical flow of activities. Requirements are anticipated and systematically addressed.
- 4. Implements management control systems that provide for identification of problems to the appropriate management level. Clearly defines problems with factual supporting information and rationale.

5. Responsive to the government in supporting technical, schedule and cost issues. Responds to government direction in compliance with industry standards and modes of operation. Demonstrates positive cooperation, and initiative.

C. Corporate Cost

This category considers, but is not limited to, the following factors:

- 1. Cost control: Contractor's ability to control costs.
- **2. Data:** Contractor's ability to submit data in a timely manner as requested by the government.

a. ABOVE STANDARD

A. <u>EXCELLENT (91-1</u>00)

- 1. Substantially meets the requirements of the Very Good rating, plus:
- 2. Consistently anticipates possible sources of cost growth and seeks ways to avoid potential cost problems. Proposes innovative and thoroughly cost effective approaches to issues with which the Contracting officer agrees.
- 3. Cost management system identifies issues and solutions to maintain cost and manpower levels below the negotiated levels and in accordance with DoD appropriation and authorization language.

B. VERY GOOD (81-90)

- 1. Substantially meets the requirements of the Good rating, plus:
- 2. Contractor prepares and develops graphic program cost and schedule data that provide a corporate level assessment with clear program office visibility into current and forecast program costs and schedules. Significant variances are adequately explained and corporate management action has been undertaken to resolve the issue.
- 3. Contractor performs necessary corporate contingency planning and keeps close and timely communication with the government on cost and schedule issues.
- 4. Plans, develops and executes viable procedures that incorporate the flexibility necessary to be responsive to changing priorities and schedules without adversely affecting overall contract cost and completion schedule. Executes innovative resource management and planning to minimize any adverse impact on the contract.

5. Provides advanced notification of administrative actions that significantly affect costs, (e.g., in the areas of salaries, general overhead, etc.), in sufficient time for evaluation prior to effectivity.

b. MEETS STANDARD

A. GOOD (66-80)

- 1. Substantially meets the requirements of the Satisfactory rating, plus:
- 2. Cost reports are submitted with reasonable traceability within and between reports. Adjustments or other perturbations are fully and clearly explained.
- 3. Takes measures to avoid unreasonable cost growth (e.g., overhead, salaries, etc.). Corrective actions are briefed to the contracting officer and are generally accepted without changes.
- 4. Cost data are consistent and logical and based on overall contract requirements. Significant variations between cost elements and requirements and their effects are adequately explained. Contractor recognizes where cost growth may be occurring and provides timely documented justification of issues, which may require application of additional resources.

B. SATISFACTORY (51-65)

- 1. Meets minimum requirements of the contract.
- 2. Usually demonstrates efficient use of resources in most instances is able to control costs that can be affected by the contractor.
- 3. Monthly status reports and other CDRL requirements are usually submitted within the time limits specified.
- 4. Usually demonstrates conscientious control over all expenditures, including efforts to avoid cost growth.

Annex 7

Attachment 1

EXAMPLE OF CUSTOMER SATISFACTION TASKING LETTER

24 March 2004

MEMORANDUM FOR AEROSPACE CUSTOMERS

FROM: SMC/AXC

SUBJECT: Request for FY 04 Aerospace Performance Evaluations

- 1. SMC's Aerospace Corporation contract FA8802-04-C-0001 requires that the customers provide a Performance Evaluation, of their STE support, for each evaluation period. **The current evaluation period is from 1 Oct 03 to 31 Mar 04**. Inputs are to be submitted to SMC/AXC (Attn: Mr. Paul Kocincki) not later than the close of business on **30 Apr 04**.
- 2. Each SPO/Agency shall provide a Summary Level Evaluation, covering all the JONs assigned to your organization. This will include a **Summary Performance Rating (%)** for your Aerospace STE support and a **Performance Rating (%)** with clear, concise statements of strengths/weaknesses **for each of the four evaluation categories** listed that support your overall summary performance rating (%). Use asterisks to show the level of importance of the strengths/weaknesses as follows:

* Minor ** Moderate *** Major

Your evaluation must consider the quality of work performed by Aerospace STE support, without **singling out named individuals**, for outstanding or poor performance. Each organization's evaluator shall coordinate their evaluations through their 2-letter office or the appropriate agency focal point. Use the format enclosed at attachment 1 for your input.

- 3. Any weakness identified in the evaluation should be discussed with the appropriate Aerospace counterpart and an effort should be made, in sufficient time, to allow for the resolution of the problem.
- 4. An email version of this letter and all attachments will be sent to each of your points of contact.

5. Please submit your inputs electronically via email to Paul Kocincki at **(PAUL.KOCINCKI@Losangeles.af.mil).** If your email cannot connect with this address, you may FAX your input to 310.363.1217 or send a hardcopy to the address as follows:

SMC/AXC Attn: Paul Kocincki 2420 Vela Way, Suite 1866 El Segundo, CA 90245-4659

6. If there are any questions regarding the evaluations, please contact Mr. Paul Kocincki at 1-310- 363-2533 or DSN 833-2533 or via email.

// signed //
KURT JOHNSON, GM-14
Director, Acquisition Support Contracts

Attachments:

1. SMC FFRDC USERS GUIDE -ANNEX 7 (w/o attachments) (Customer Satisfaction Performance Evaluation Process)

cc: Aerospace Corporation

Annex 7

Attachment 2

CUSTOMER SATISFACTION SUMMARY PERFORMANCE EVALUATION REPORT

SPO /ORG.:	JON(s)	_
Interim	Final	
SUMMARY PERFO	RMANCE EVALUATION RATING	
Provide major strong point	TEGORIES: of importance for each point with aster ts of Aerospace performance using criteria with specific examples that support the ra	a provided in the
Provide major weak points	el of importance for each point with ast s of Aerospace performance using criteria with specific examples that support the ra	provided in the
1. MANAGEMENT EFFECTI	IVENESS AND COST CONTROL	
Cost effective, efficient organ productivity, leadership, guid	nization, technical expertise skills mix, dance and initiative.	
STRENGTHS		
WEAKNESSES		
2. MEETING TECHNICAL N	EEDS & PROBLEM SOLVING	%
accomplishments and inputs,	bjectivity, adequacy of technical contribution to program success, op solutions within established cost	
STRENGTHS		
WEAKNESSES		
3. RESPONSIVENESS	-	
Evaluate Aerospace's respon emphasis on timeliness and q	se to program requirements with quality.	
STRENGTHS		
WEAKNESSES		

4.	WORKING RELATIONS	%

Evaluate the ability of Aerospace employees to interrelate with government and industry through demonstration of positive cooperation, initiative, enthusiasm and communications.

STRENGTHS

WEAKNESSES

Annex 7 Attachment 3

CORPORATE MANAGEMENT PERFORMANCE EVALUATION REPORT

1. EFFECTIVENESS OF MANAGEMENT APPROACH

[Example. Use a slide for each Corporate Management Criteria]

- STRENGTHS [Indicate level of importance for each point]
 Provide major strong points of Aerospace performance for each criteria provided in SMC FFRDC Users Guide with specific examples that support the rating shown.

 [Bullets only]
- WEAKNESSES [Indicate level of importance for each point]
 Provide major weak points of Aerospace performance for each criteria provided in SMC FFRDC Users Guide with specific examples that support the rating shown.
 [Bullets only]

FOR OFFICIAL USE ONLY

Annex 7

Attachment 4

CORPORATE COST PERFORMANCE EVALUATION REPORT

	FOR OFFICIAL	USE ONLY
CO]	RPORA	TE COST
OFF	ICE SYMB	OL
		umberical Rating]
INTERIM	FINAL	[Check appropriate box]

1. COST CONTROL

[Example. Use a slide for each Corporate Cost Criteria]

• STRENGTHS [Indicate level of importance for each point]

Provide major strong points of Aerospace performance for each criteria provided in SMC FFRDC Users Guide with specific examples that support the rating shown. [Bullets only]

• WEAKNESSES [Indicate level of importance for each point]

Provide major weak points of Aerospace performance for each criteria provided in SMC FFRDC Users Guide with specific examples that support the rating shown. [Bullets only]

FOR OFFICIAL USE ONLY

ANNEX 8

20 January 2004

Aerospace FFRDC Contract Overview of Processes, Responsibilities and Surveillance

Annex 8

Attachment 1

TRAINING PACKAGE



Process Overview

- Purpose of this training
- References
- Definitions
- Placing FFRDC Work on the AF/Aerospace Contract
 - Annual Call Process
- Inappropriate Uses of the FFRDC
- Program Office/Agency Responsibilities
- FAE Responsibilities
- Electronic Monthly Status Reports
- Surveillance Folder
- Conclusion



Purpose of Training

- Meet requirement for phase 2 training
 - AFI 63-124 para 4.2.2.3
- Provide FAEs and FDs the information needed to do their jobs effectively
- Familiarize FAEs and FDs with the SMC FFRDC Users Guide (FUG)

3



References

- Federal Acquisition Regulation (FAR) 35.017
 - Regulatory criteria for establishing, continuing, and terminating an FFRDC
- AFI 63-124 "Performance-Based Service Contracts" (1 Apr 99)
 - AFMC SUP 1 (19 Jul 99)
 - Requirements for writing and administering service contracts
- SMC FFRDC Users Guide (20 Jan 04)
 - Describes policies and procedures and assigns responsibilities using Aerospace FFRDC capabilities



Definition of an FFRDC

- A private, public service activity managed by an industrial, academic, or other non-profit entity
- Established at the Government's request
 - USECAF is the sponsoring agent for Aerospace FFRDC work
- Provides technical expertise of a type and character which cannot be provided as effectively by any other sector: government, academic, or commercial

5



Definitions

- Member of the Technical Staff (MTS)
 - Professional scientist or engineer actively and directly engaged in performing General Systems Engineering & Integration, Technical Review, and Technical Support
- Staff Year of Technical Effort (STE)
 - 1 STE is equivalent to 1810 hours of work by an MTS
- Technical Objectives and Plans (TO&Ps)
 - Project-specific statement of work



Definitions

- Enabling Clause
 - Agreement contained in all major SMC contracts that allows Aerospace to obtain technical information of a proprietary nature from another contractor
 - Ensures the contractor that the information will not be divulged
- Conflict of Interest Clause
 - Agreement contained in the Aerospace contract that prohibits Aerospace from divulging any information obtained through FFRDC activities

7

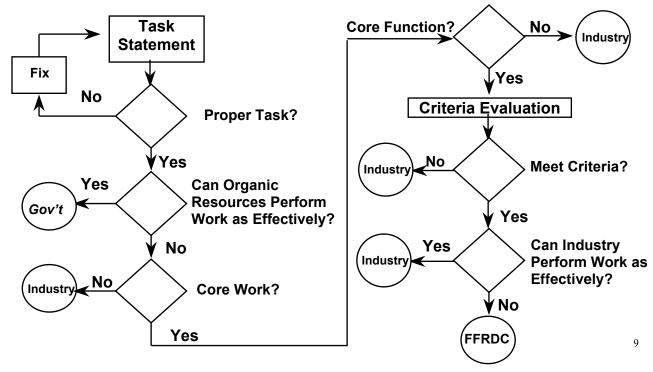


Placing FFRDC Work on the AF/Aerospace FFRDC Contract

- Annual Call Process
 - Verify the task is a proper FFRDC task
 - Develop TO&P
 - Certify decision making process

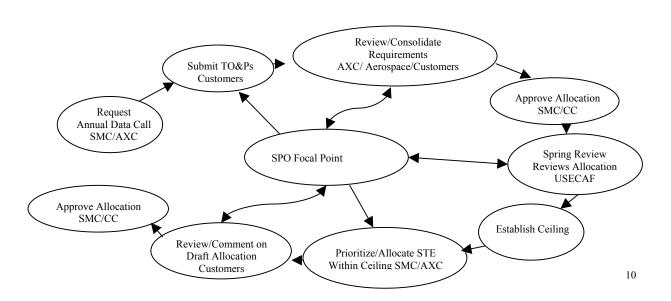


Determine if the Task is a Proper FFRDC Task





Aerospace FFRDC Allocation Process





Consistent with the Special Relationship Between Aerospace and the Air Force

- FUG Annex 3, Attachment 2
- Characteristics
 - Objective, high quality work
 - Freedom from real or perceived conflicts of interest
 - Broad access to information
 - Comprehensive knowledge of Sponsor needs and problems
 - Long-term continuity
 - Technical link between the USAF space program and other scientific and industrial organizations worldwide that affect national security space

Criteria for Assignment of Work to the Aerospace FFRDC Applied and Validated

- FUG Annex 3, Attachment 3
- 11 criteria, some overlap between them
- Task must require any 1 of the 11 criteria in order to be given to Aerospace
- Key criteria
 - Freedom from bias due to predilection for design, hardware and software, or approach
 - Need for state-of-the-art information from Government labs and universities
 - Extent of access to DoD planning information

16



All Tasks Fall within the 10 FFRDC Core Functions

- FUG Annex 3, Attachment 3
- Broad, general categories of work
 - Systems Architecture Planning and Development
 - Operational Requirements Analysis and Evaluation
 - Integration Management
 - Mission and Threat Analysis
 - Technical Performance Analysis and Assessment



FFRDC Core Functions Continued

- Acquisition Planning, Preparation, and Evaluation
- Program, Milestone, and Design and Readiness Reviews
- Technology Requirements, Applications, and Research
- Program Systems Engineering
- Monitoring Launch Vehicle and Satellite Processing and Certifying Launch Readiness

18



Cannot be Performed as Effectively by Anyone Else

- If the work can be performed as effectively by
 - Existing in-house "organic" personnel
 - Other not-for-profit contractor resources
 - For-profit contractor resources

IT MUST BE!



Inappropriate Uses of the FFRDC

- Aerospace FFRDC should not be used for
 - Routine technical, administrative, or management tasks that could be considered personal services
 - Augmentation of Government staff and circumvention of manpower ceilings
 - Any work that government or industry can perform as effectively

20

Program Office/Agency Responsibilities

- SPD acts as Functional Director (FD)
 - Assigns FAEs
- Determine and justify requirements for Aerospace FFRDC support IAW FUG
- Budget and fully fund requested STE support
- Prepare TO&Ps in coordination with Aerospace counterpart (Level 4 at least)
 - Provide in-house functional expert review
 - Ensure tasks are specific and clear enough to develop accurate estimates of the level of support required



SPO Responsibilities (continued)

- Prepare Aerospace FFRDC performance evaluations IAW SMC FUG Annex 7
- Receive contractually required reports
 - Review, approve, and process Technical Reports (TR)
 - Review, approve, or revise distribution lists for Technical Operating Reports (TOR)
- Monitor Aerospace FFRDC technical support
- Provide assessment to the cognizant Aerospace FFRDC Director

22



FAE Responsibilities

- Maintain FFRDC Surveillance Folders IAW FUG Annex 7
- Submit performance evaluation reports IAW FUG Annex 7
- Notify the ACO and SPD of any contractual problems
- Do NOT authorize changes to the contract
- Understand TO&P requirements



Surveillance Folder

- Tab 1: Index
- Tab 2: Surveillance Log
 - Exception memos
 - Correspondence
- Tab 3: Monthly Status Reports (MSR)
 - Monthly cost reports
- Tab 4: Performance Evaluation Notes
 - Semi-annual performance evaluation submissions
- Tab 5: Technical Objectives and Plans
- Tab 6: SMC FFRDC User's Guide
 - http://ax.losangeles.af.mil/axc



Conclusion

- Aerospace is a vital resource that must be managed carefully
- Questions? Contact:

STE requirements
 Contractual issues
 Mr. Paul Kocincki 3-2533
 Mr. Marco Rodriguez 3-6344
 Mr. Alfred Lansangan 3-5790

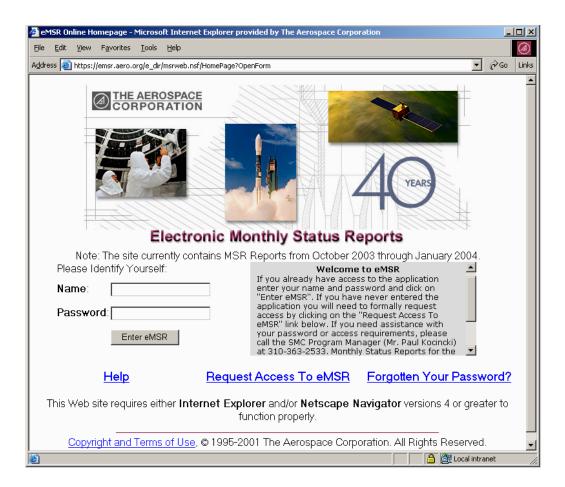
- AXC Program Mgmt Mr. Kurt Johnson 3-2561

Annex 8

Attachment 2

ELECTRONIC MONTHLY STATUS REPORTS

Getting Started Using the New Online EMSR Web Site https://emsr.aero.org/



Contents

- 1. What is eMSR?
- 2. How Do I Sign Up?
- 3. The Home Page
- 4. Anonymous Help
- 5. Initial eMSR Access Request Form
- 6. Change Password Request Form
- 7. Online Web Interface
- 8. MSR Report

1. What is eMSR?

The Electronic Monthly Status Reports Web site (or eMSR) is a fully secure and easy to use method of accessing the required monthly financial status reports for technical work performed under the Federally Funded Research and Development Center (FFRDC) contract. Financial reporting requirements are described in contract FA8802-04-C-0001, CDRL A0001.

The essential purpose of the application is to provide easy access to specific Adobe Acrobat (PDF) versions of the Monthly Status reports within a standard Web Browser interface. This will be done with plans of eliminating the need to print and mail the reports on a monthly basis to the hundreds of individuals who need the information.

In order to manage this highly sensitive data, the eMSR application includes a full-featured interface that easily enables Air Force and Aerospace personnel to view, manage access, and control the MSR report data.

Features of the application include:

Anonymous Access Request

Anonymous users (those who have not yet been given access to the information) can easily request access to the system via the site's homepage.

Additional Job Order Access Request

Users who already have access to one or more MSR reports, can easily request access to additional Job Orders via a JO Request form.

Access Approval Workflow

All requests, be they initial user access or specific Job Order requests, are routed through a highly secure approval process. This process includes specific approval from the Air Force as well as Aerospace.

Automatic Notifications

Throughout all of the access approval workflow, relevant email notifications are sent out to the proper individuals alerting them to newly created requests, as well as to significant status changes in any particular request's workflow process.

MSR Reports

Users, who have successfully entered their name and password, can locate specific MSR Reports to which they have been given access. These can be located by Job Order number and/or the report's time period.

Online Help

Throughout the application, from the Homepage down to specific views, the application has Help links that take the user to content specific help documents on how to use the Web site, troubleshooting problems and descriptions of how to interpret the site's content.

2. How Do I Sign Up?

This section assumes that you have not yet received a name and password for access to the eMSR Web site. If you follow the steps below you will be submitting a request that includes your name and a password of your choice. Once processed you can then gain access to the Web site using these two values.

First, you will need access to the Internet and a Web browser that is capable of supporting the application. The Web site can be accessed using either MS Internet Explorer 4.0 (or higher) or Netscape Navigator 4.01 (or higher). The browser, if it isn't already, must also have JavaScript enabled.

Once you have a compatible browser and have access to the Web, follow these 4 steps below:

Step 1. Go to https://emsr.aero.org

Enter this Web address to view the eMSR Homepage: https://emsr.aero.org. Notice that the first five characters are "https" rather than the standard "http". The "s" represents a secure transaction much like you might see in a Web site that supports secure credit card transactions.

Later on in this document you can read a more detailed description of the Homepage and what each of the

links represent.



Step 2. Click on the "Request Access To eMSR" Link

Since this is a secure site, you will need to agree to any Verisign certification dialog boxes that will appear when first accessing this site.

Once you have agreed to the site's certification you will be viewing the eMSR Homepage. Near the bottom of the page are a number of <u>blue text links</u>. Click on the center link labeled "Request Access To eMSR".

This will take you to the Initial User Access Request form.



Step 3. Complete and Submit the Initial User Request Form

Fill out the request form and click on the "Submit Request" icon that appears at the top of the form. You will need to enter a value for all of the required fields before submitting the request (indicated with red diamonds - ...)

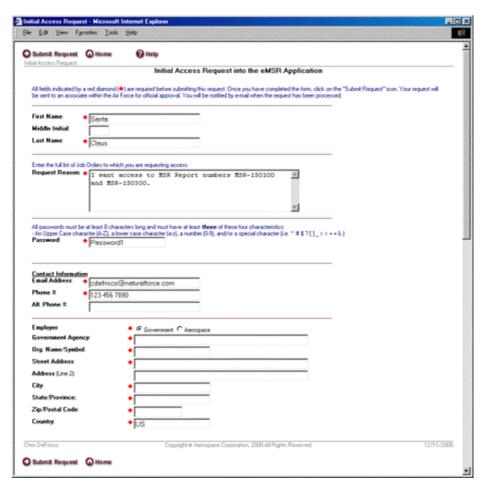
The password field, as you can see if you are viewing the form, requires a fair amount of complexity (for security reasons.) The requirements for any password are as follows:

All passwords must be at least 8 characters long and must have at least **three** of these **four** characteristics:

- An Upper Case character (A-Z)
- A lower case character (a-z)
- A number (0-9)
- A special character (~ # \$? [] _ > < + = &)

Note that the password must contain <u>three</u> of the four characteristics, not all four. "Password1" would be valid, but "password1" would be invalid since it only contains lower case characters and a number, only two of the four characteristics.

IMPORTANT: It is <u>vital that you remember your password</u>. You will not be reminded of its value in the future. Also, make sure you enter a valid email address as you will be notified when your request has been processed using the address you enter.



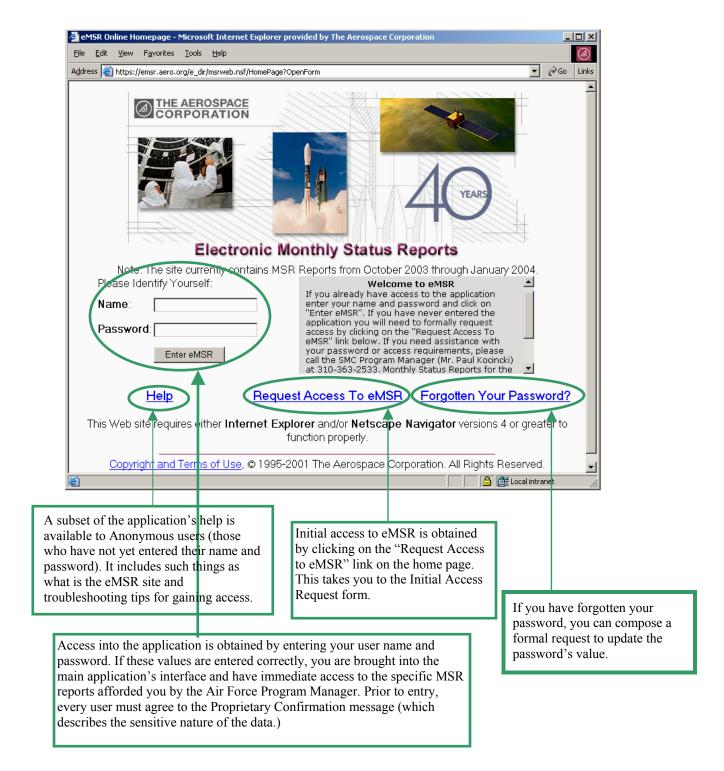
Step 4. Read Confirmation and Await Notification

When you have successfully entered a request, you will be presented with a confirmation page. The request will then be routed through the Air Force Program Manager and eventually through Aerospace. If you entered a valid email address you will be notified when the final approval has taken place and when you can enter the application.



3. The Home Page

The Homepage (https://emsr.aero.org) of the Web site is accessible to the public at large. A user already in the system must enter their name and password before gaining access to any sensitive data. The Anonymous user, however, has access to some generic help information as well as the ability to request access. Or, if they've forgotten their password, to request an update to their existing password.



4. Anonymous Help

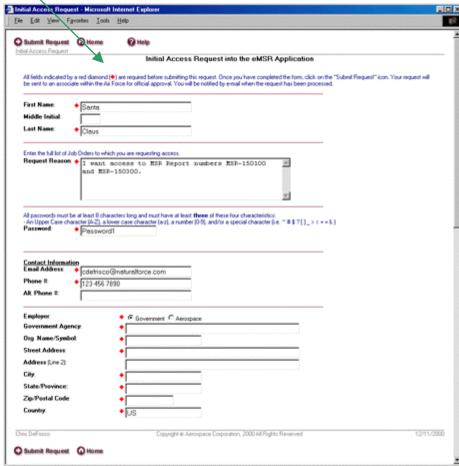
From the homepage, any user has the ability to access the "Anonymous" list of help documents. This list is viewed by clicking on the Help link within the homepage. A list of relevant help documents concerning the eMSR Web site and troubleshooting access problems is provided.



5. Initial eMSR Access Request Form

This is form is accessed from the homepage by an Anonymous user. It is the standard method for a user to request access into the application. When submitted this document is first routed to an Air Force Program Manager and then to Aerospace for approval. Details on how to gain access to the Web site via this form can be read in section 1 of this document entitled "How Do Is Sign Up?"

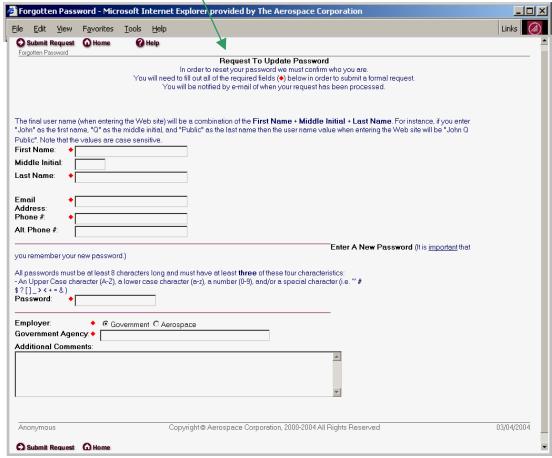




6. Change Password Request Form

If you have forgotten your password, this link will take you to a form to formally request that your password get updated. Since altering a password is a security issue, this form is routed in much the same way an initial access request is handled, first to an Air Force Program Manager and then to Aerospace for approval. You will be notified via email when the request has been processed.





7. Online Web Interface

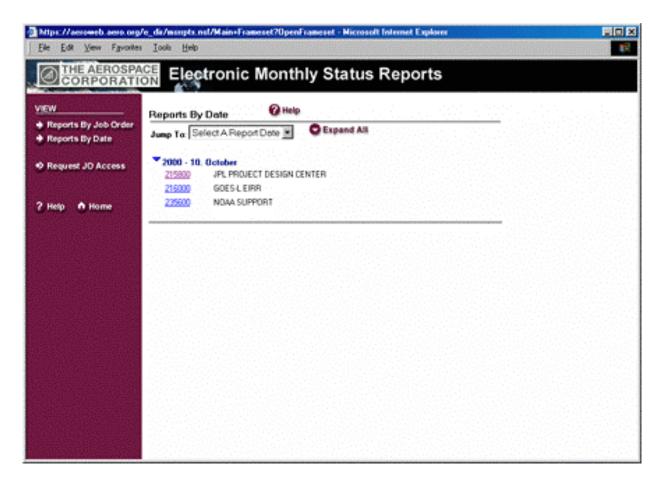
The eMSR interface, once you have successfully entered the Web site, is relatively simple. A side panel with a few links provides the entire navigation for the site.

The first two links take you to categorized of the MSR Reports that you have been given access. The lists are categorized by Job Order number and/or the report's time period. The default window, when you first enter the application, is the "Reports By Date" view.

You can request access to additional MSR Reports by clicking on the "Request JO Access" link. This will take you to a form, similar in nature to the Initial User Access Request, but with fewer fields. This request is routed through the standard approval process.

The final two elements on the side navigator are a link to all of the available help documents and a link back to the homepage.

If you click on one of the two MSR "views" you can then click on any one of the Job Order links that appear within the views in <u>underlined blue text</u>. This will open the actual MSR Report over the web in Adobe Acrobat's PDF format.



8. MSR Report

The ultimate purpose of the site is to view the MSR Reports online. All of the reports are supplied in Adobe Acrobat PDF format. This is a Web standard imaging method for taking traditionally printed material and delivering them in an easy to use and read format electronically.

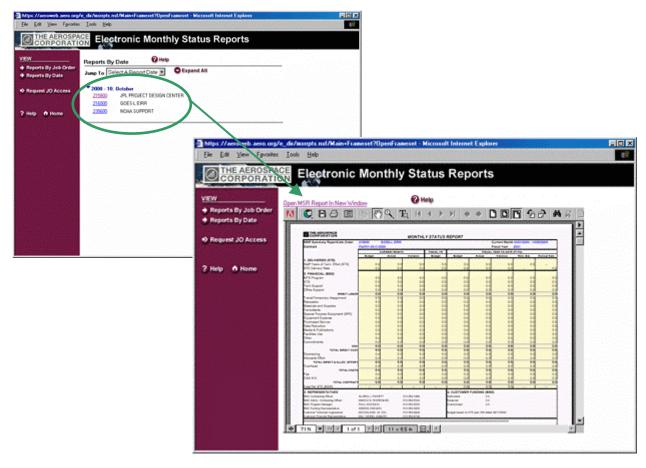
Once a user has clicked on any given MSR Report link, within either of the two MSR Report views, they are then taken directly to the MSR Report PDF file.

You have a number of options at this point. You can click on the "Open MSR Report in New Window" link, which will open a new Browser window and fill the window with a much larger (and easier to view) version of the PDF file. You can also click on the "? Help" icon that will present you with information concerning PDF files and how to interpret the MSR Report data. You also have access to Adobe Acrobat's "control bar".



This bar provides you with a number of additional capabilities like zooming into portions of the PDF file for easier readability. A section of the "? Help" document includes a detailed description of each control bar icon's function.

Note: If you do not see this control bar right away you are probably using Netscape Navigator. Netscape requires that you right-click your mouse anywhere within the PDF file and select "Open (filename...)" to display these controls.



ANNEX 9

20 January 2004

Contract Deliverable Items

ANNEX 9

CONTRACT DELIVERABLE ITEMS

This Annex provides the business and technical deliverables required under contract and defined in the Contract Data Requirements List (CDRL). There are three types of technical deliverables: 1) periodic program progress, status or planning reports (also referred to as Contract Status Reports, CSRs), 2) non-periodic Technical Operating Reports (TORs) delivered as needed to convey technical data or information on a timely basis, and 3) more formal Technical Reports (TRs) delivered as needed when scientific or technical information of a significant nature has been identified. TORs are not limited to written reports. Significant letters, drawings, briefings, test data, databases, videotapes, etc. may be accounted for as contractual deliverables of the TOR category. Individual program requirements for contract deliverables (e.g., frequency, format, medium, etc.) are to be specified in the Technical Objectives and Plans for the program.

The complete set of deliveries that The Aerospace Corporation has contracted to provide, including non-technical deliverables, is summarized in the SMC FFRDC Users Guide <u>section</u> <u>4.2.2.f.</u> The front page of each CDRL is included in this annex. Questions pertaining to CDRLs should be addressed to the Contracting Officer.

CODES USED ON DD FORM 1423

CONTRACT DATA REQUIREMENTS LIST

<u>CODE</u> <u>EXPLANATION</u>

A Approval of draft is required by SMC

ASREQ As required

ATP+CD Authority-to-proceed plus specified number of calendar days

(e.g., ATP+30 CD means authority-to-proceed plus thirty

calendar days)

BLK 16 Block 16 of Form 1423

CD Calendar Days

D Distribution Statement is required and shall be assigned as

specified in paragraph 9 of the CDRL Foreword

DID Data Item Description

EOC End of Contract

FY Fiscal Year

LT Letter of transmittal

MTHLY Monthly

NTE Not to Exceed

CODE Explanation

ONE/R One Time and Revisions

OTIME One Time

SOW Statement of Work

TLO Transmittal Letter Only

WD Working Days

(2 Data Items)

Form Approved OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information including suggestions for reducing the burden, to Department of Defense. Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to complete with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government issuing Contracting Officer for the Contract/PR No, listed in Block E.

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	: Engr & Tech Ef	ort		2-04-C-0001	1.3014	The Aerospace Corporation					
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A001	Per	formance	and Cost Re	eport		Monthly Status	Report				
	Acquisition Document No.)	• •	5. CONTRACT RE			6. REQUIRING OFFICE			_		
DI-I	FNCL-80912/T			Para 4.1 SOW		SMC	:/AXC				
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end of each mo	onth and be includ	ěd with t	he monthly a	djustment vouche	r. Detail						
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			or each mont	11.				}			
*If Options 1 to	hrough 4 are exer	cised.									
						15. TOTAL	<u> </u>	!	3		
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4. AUTHORITY (Data .	Acquisition Document No.)		5, CONTRACT RE	FERENCE		6. REQUIRING OFFICE					
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A. CONTRACT LINE ITEM NO. 0002 and (4/6/8/10)* B. EXHIBIT C. CATEGORY: TDPTM						OTHER					
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A002	Рег	formance	e and Cost Rej	port		Quarterly Managem	ent Re	port			
4. AUTHORITY (Data Ac	quisition Document No.)		5. CONTRACT REF	ERENCE	1	6. REQUIRING OFFICE					
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(2 Data Items)

Form Approved OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0788), 1215 Jefferson Davis Highway, Suite 1204, Artington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information it it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the department of the Control Price for the Control Price Isted in Block E.

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A003		Progress Report									
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(excluding MC	DIE which is provi	ded for u	nder MOIE A	nnual Program Pl	ans						
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achievements a	against the DoD printer in the DoD printer in the p	rograms.	Ü	, , ,		15. TOTAL				<u> </u>	
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cause for new	entifying work. The predictions, past productions, past productions.	erformar	ice or future p	plans to show cont	inuity	ļ					
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Form Approved OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarfers Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Sand completed form to the Government Issuing Contracting Officer for the

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D. SYSTEM/ITEM Scientific	VI Engr & Tech Eff	fort	E. CONTRACT/PR NO. F. CONT FA8802-04-C-0001			TRACTOR The Aerospace Corporation					
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A004	L. Ma, or Dara nor		Status Report			Program Plans & P	rogress	Repor	rts		
	Acquisition Document No MGMT-80368/T). <i>)</i>	5. CONTRACT RE	FERENCE Para 4.3 SOW	l	6. REQUIRING OFFICE SMC	Z/AXC				
7. DD 250 REQ	9. DIST STATEMENT	10. FREQUI	ENCY	12. DATE OF FIRST SU	BMISSION	14. DISTRI	BUTION				
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FORMAT: TI	ne Contractor shal	l provide	a report of pr	rogress achieved in	n the	3,05,2223	1				
MOIE program	n during the repor	ting perio	od and provide	e program plans pi	roposed	-					
for the follow-	on fiscal year, for	review,	coordination a	and approval vy th	e U.S.						
Air Force Space	ce and Missile Sys	items Cer	iter, System A	Acquisition Directorts shall contain as	orate,				1		
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imminum circ i	onowing informati	.1011.					+				
1. Program Pl	lans										
a. A statem SMC mission.	nent of objectives	for each	project/task ar	nd its relevance to	the						
b. A narrat SMC programs		each pro	ject/task and i	ts potential impact	t on						
describing the		rific goals	s, including ar	low-on fiscal year, ny unique new equ rogram.							
d. Plans for status and futur		ents supp	orted under th	nis program, inclu	ding a						
e. Proposed	i STE level of effo	ort.									
2. Annual Pro	gress Report										
a. A narrati	ive discussion of t	he backg	round of each	MOIE project and	d its						
	v of activities and e context of the go			ng the reporting pe program plans.	eriod,						
c. Identificated and their cause		ïcant re-c	lirection or re	-orientation, majo	r delays						
d. A list of the MOIE prog	contractual techniques the re	ical repor porting p	ts and profess eriod.	sional papers prepa	ared for						
3. Semiannual	Progress Report										
*If Options 1 rl	hrough 4 are exer	cised				15. TOTAL	17		52		
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- a. A narrative discussion of the background of each MOIE project and its relevance to the SMC programs.
- b. A review of activities and accomplishments during the reporting period, discussed in the context of the goals established in the program plans.
- Block 7: A monthly listing of reports in electronic format is acceptable in lieu of DD250s.
- Block 8: "A" for Annual Program Plan N/A for Progress Reports
- Block 9: "For limited internal distribution within The Aerospace Corporation, Space and Missile Systems Center, the National Reconnaisance Office, and the Air Force Research Laboratory. When no longer needed, destroy as "Official Use" or "Company Private."

Blocks 10,11, 12, and 13:

MOIE Program Progress Reports:

- Annual MOIE Program Progress Report is due 45 days after end of each FY and shall address the entire FY just completed.
- Semiannual Progress Report (preliminary draft copy) is due 30 calendar days after end of the first six months of fiscal year (30 April) and shall address the first half of the fiscal year.

MOIE Program Plans:

Program Plans, covering the follow-on FY, shall be submitted as follows:

- Preliminary (draft) copy for review and approval 60 calendar days prior to the end of fiscal year, one copy (I/O) to SMC/AXC, SMC/AXE, and other AF organizations, as directed by the program manager, not to exceed 50.
- Final copies, incorporating changes/comments against draft, NLT 45 days after receiving comments. One copy each to SMC/AXC, SMC/AXE, AFRL/CC, NRO/AS&T.
- *If Options 1 through 4 are exercised.

DD FORM 1423-1, FEB 2001

Page 25 of 41 Pages

(2 Data Items)

Form Approved OMB No. 07040188

The public reporting burden for this collection of information is estimated to average 220 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Organics and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contractif No. isted in Block E.

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A. CONTRACT LINE ITEM NO. B. EXHIBIT C. CATEGORY: O002 and (4/6/8/10)* A TDP											
D. SYSTEM/ITEI Scientific	M Engr & Tech Eff	F. CON	NTRACTOR The Aerospace Corporation								
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	Acquisition Occument No.)		5. CONTRACT RE		<u> </u>	6. REQUIRING OFFICE					
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(2 Data Items)

Form Approved OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO. B. EXHIB 0002 and (4/6/8/10)*			ы т А	C. CATEGORY:	HER						
D. SYSTEM/ITEM Scientific Engr & Techn Effort			E. CONTRAC FA880	T/PR NO. 2-04-C-0001	F. CON	TRACTOR The Aerospace Corporation					
1. DATA ITEM NO.	2. TITLE OF DATA ITEM	!	TLE								
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(2 Data Items)

Form Approved OMB No. 0704-0188

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ANNEX 10

20 January 2004

List of Acronyms

Annex 10

LIST OF ACRONYMS

AFRL – Air Force Research Laboratories

APO – Aerospace Program Office

CDRL – Contract Data Requirement List

CIRD – Corporate Information Resource Division

CRA – Continuing Resolution Authority

DARPA – Defense Advanced Research Projects Agency

DIA – Defense Intelligence Agency

DISA – Defense Information Systems Agency

DMA – Defense Mapping Agency

DSWA – Defense Special Weapons Agency

FAC – Functional Area Chief

FAE – Functional Area Evaluator

FD – Functional Directors

FFRDC – Federally Funded Research and Development Center

GSE&I – General Systems Engineering and Integration

IPT – Integrated Product Teams

IR&D – Independent Research and

Development

IRR – Independent Readiness Reviews

IRRT – Independent Readiness Review Teams

ITA – International Technical Assessment

LRR – Launch Readiness Reviews

MOIE – Mission Oriented Investigation and Experimentation

MOU – Memorandum of Understanding

MPSE – Multi-Program Systems

Enhancement

MRR - Mission Readiness Reviews

MTS – Members of the Technical Staff

NRO – National Reconnaissance Office

NSA – National Security Agency

ODCs – Other Direct Costs

OJCS – Office of Joint Chiefs of Staff

P&SA – Plans and Systems Architecture

PCO – Procurement Contracting Office

PMR – Program Management Reviews

PRAG – Performance Risk Assessment Group

RFP – Requests for Proposals

SETA – Systems Engineering and Technical Assistance

SPO – Systems Program Officer

SPPE – Special Purpose Product Equipment

SRDT&E – Selected Research,

Development, Test and Evaluation

STE – Staff-year of Technical Effort

TIMs – Technical Interchange Meetings

TO&Ps – Technical Objectives and Plans

TOR – Technical Operating Reports

TR – Technical Review

TS – Technical Support